



11 5

## SEQUENCE LISTING

<110> Makowski, Lee  
Hyman, Paul  
Williams, Mark

<120> STAGED ASSEMBLY OF NANOSTRUCTURES

<130> 8471-010-999

<140> 10/080,608

<141> 2002-02-21

<160> 180

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 28

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 1

Met	Lys	Gln	Leu	Glu	Asp	Lys	Val	Glu	Glu	Leu	Leu	Ser	Lys	Asn	Tyr
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His	Leu	Glu	Asn	Glu	Val	Ala	Arg	Leu	Lys	Lys	Leu				
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<210> 2

<211> 28

<212> PRT

<213> Unknown

<220>

<223> Probable variant of homo sapiens protein.

<400> 2

Thr	Asp	Thr	Leu	Gln	Ala	Glu	Thr	Asp	Gln	Leu	Glu	Asp	Glu	Lys	Tyr
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Ala	Leu	Gln	Thr	Glu	Ile	Ala	Asn	Leu	Leu	Lys	Glu				
		20						25							

<210> 3

<211> 28

<212> PRT

<213> Unknown

<220>

<223> Probable variant of homo sapiens protein.

<400> 3

Ala	Ala	Arg	Leu	Glu	Glu	Lys	Val	Lys	Thr	Leu	Lys	Ala	Gln	Asn	Tyr
1				5				10						15	
Glu	Leu	Ala	Ser	Thr	Ala	Asn	Met	Leu	Arg	Glu	Gln				
		20						25							

<210> 4

<211> 35

<212> PRT

<213> Mus musculus

<400> 4

Val	Leu	Glu	Thr	Gln	His	Lys	Asn	Glu	Arg	Leu	Thr	Ala	Glu	Val	Glu
1				5				10					15		
Gln	Leu	Gln	Lys	Lys	Leu	Ser	Thr	Leu	Ser	Arg	Glu	Phe	Lys	Gln	Leu
			20					25					30		
Arg	Asn	Leu													
		35													

<210> 5

<211> 35

<212> PRT

<213> Homo sapiens

<400> 5

Cys	Lys	Glu	Leu	Thr	Gly	Glu	Asn	Glu	Ala	Leu	Glu	Lys	Lys	Ala	Asp
1				5				10					15		
Ser	Leu	Lys	Glu	Arg	Ile	Gln	Tyr	Leu	Ala	Lys	Glu	Ile	Glu	Glu	Val
			20					25					30		
Lys	Asp	Leu													
		35													

<210> 6

<211> 33

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 33

<223> Xaa = Any Amino Acid

<400> 6

Cys	Gly	Gly	Val	Gln	Ala	Glu	Glu	Gln	Lys	Leu	Ile	Ser	Glu	Glu	Asp
1				5				10					15		
Leu	Leu	Arg	Lys	Arg	Arg	Glu	Gln	Leu	Lys	His	Lys	Leu	Glu	Gln	Leu
			20					25					30		
Xaa															

<210> 7

<211> 33

<212> PRT

<213> Mus musculus

<220>

<221> VARIANT

<222> 33

<223> Xaa = Any Amino Acid

<400> 7

Cys	Gly	Gly	Met	Arg	Arg	Lys	Asn	Asp	Thr	His	Gln	Gln	Asp	Ile	Asp
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Xaa															

<210> 8

<211> 32  
 <212> PRT  
 <213> Unknown  
 <220>  
 <223> Probable variant of Mus musculus protein

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 Thr Leu Ile Glu Glu Leu Lys Ala Leu Lys Asp Leu Tyr Ser His Lys  
 20 25 30

<210> 9  
 <211> 33  
 <212> PRT  
 <213> Schizosaccharomyces pombe

<400> 9  
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 Gln Leu Arg Gln Lys Val Arg Gln Leu Glu Glu Glu Leu Arg Ile Leu  
 20 25 30  
 Lys

<210> 10  
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 <213> Mus musculus

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 Ser His Asn Gly Leu Leu Ala Asp His His Glu Ser Leu Asp Asn Asp  
 35 40 45  
 Val Ala Arg Glu Ile Gln Tyr Leu Asp Glu Val Leu Glu Ala Asn Cys  
 50 55 60  
 Cys Asp Ser Ser Val Asp Gly Thr Tyr Asn Gly Ile Ser Ser Pro Glu  
 65 70 75 80  
 Pro Gly Ala Ala Ile Leu Val Ser Ser Leu Gly Ser Pro Ala His Ser  
 85 90 95  
 Val Thr Glu Ala Glu Pro Thr Glu Lys Ala Ser Gly Arg Gln Val Pro  
 100 105 110  
 Pro His Ile Glu Leu Ser Arg Ile Pro Ser Asp Arg Met Ala Glu Gly  
 115 120 125  
 Glu Arg Ala Asn Gly His Ser Thr Asp Gln Pro Gln Asp Leu Leu Gly  
 130 135 140  
 Asn Ser Leu Gln Ala Pro Ala Ser Pro Ser Ser Thr Ser Ser His  
 145 150 155 160  
 Cys Ser Ser Arg Asp Gly Glu Phe Thr Leu Thr Thr Leu Lys Lys Glu  
 165 170 175  
 Ala Lys Phe Glu Leu Arg Ala Phe His Glu Asp Lys Lys Pro Ser Lys  
 180 185 190  
 Leu Phe Glu Glu Asp Glu Arg Glu Lys Glu Gln Phe Cys Val Arg Lys  
 195 200 205  
 Val Arg Pro Ser Glu Glu Met Ile Glu Leu Glu Lys Glu Arg Arg Glu  
 210 215 220  
 Leu Ile Arg Ser Gln Ala Val Lys Lys Asn Pro Gly Ile Ala Ala Lys  
 225 230 235 240

Trp Trp Asn Pro Pro Gln Glu Lys Thr Ile Glu Glu Gln Leu Asp Glu  
 245 250 255  
 Glu His Leu Glu Ser His Arg Arg Tyr Lys Glu Arg Lys Glu Lys Arg  
 260 270  
 Ala Gln Gln Gln Gln Leu Gln Gln Gln Gln Gln Gln Gln Leu  
 275 280 285  
 Gln Gln Gln Gln Leu Gln Gln Gln Gln Leu Gln Gln Gln Leu Gln  
 290 295 300  
 Gln Gln Leu Gln Gln Gln Leu Ser Thr Ser Gln Pro Cys Thr Ala  
 305 310 315 320  
 Pro Ala Ala His Lys His Leu Asp Gly Ile Glu His Thr Lys Glu Asp  
 325 330 335  
 Val Val Thr Glu Gln Ile Asp Phe Ser Ala Ala Arg Lys Gln Phe Gln  
 340 345 350  
 Leu Met Glu Asn Ser Arg Gln Thr Leu Ala Lys Gly Gln Ser Thr Pro  
 355 360 365  
 Arg Leu Phe Ser Ile Lys Pro Tyr Tyr Lys Pro Leu Gly Ser Ile His  
 370 375 380  
 Ser Asp Lys Pro Pro Thr Ile Leu Arg Pro Ala Thr Val Gly Gly Thr  
 385 390 395 400  
 Leu Glu Asp Gly Gly Thr Gln Ala Ala Lys Glu Gln Lys Ala Pro Cys  
 405 410 415  
 Val Ser Glu Ser Gln Ser Ala Gly Ala Gly Pro Ala Asn Ala Ala Thr  
 420 425 430  
 Gln Gly Lys Glu Gly Pro Tyr Ser Glu Pro Ser Lys Arg Gly Pro Leu  
 435 440 445  
 Ser Lys Leu Trp Ala Glu Asp Gly Glu Phe Thr Ser Ala Arg Ala Val  
 450 455 460  
 Leu Thr Val Val Lys Asp Glu Asp His Gly Ile Leu Asp Gln Phe Ser  
 465 470 475 480  
 Arg Ser Val Asn Val Ser Leu Thr Gln Glu Glu Leu Asp Ser Gly Leu  
 485 490 495  
 Asp Glu Leu Ser Val Arg Ser Gln Asp Thr Thr Val Leu Glu Thr Leu  
 500 505 510  
 Ser Asn Asp Phe Ser Met Asp Asn Ile Ser Asp Ser Gly Ala Ser Asn  
 515 520 525  
 Glu Thr Thr Ser Ala Leu Gln Glu Asn Ser Leu Ala Asp Phe Ser Leu  
 530 535 540  
 Pro Gln Thr Pro Gln Thr Asp Asn Pro Ser Glu Gly Arg Glu Gly Val  
 545 550 555 560  
 Ser Lys Ser Phe Ser Asp His Gly Phe Tyr Ser Pro Ser Ser Thr Leu  
 565 570 575  
 Gly Asp Ser Pro Ser Val Asp Asp Pro Leu Glu Tyr Gln Ala Gly Leu  
 580 585 590  
 Leu Val Gln Asn Ala Ile Gln Gln Ala Ile Ala Glu Gln Val Asp Lys  
 595 600 605  
 Ala Glu Ala His Thr Ser Lys Glu Gly Ser Glu Gln Gln Glu Pro Glu  
 610 615 620  
 Ala Thr Val Glu Glu Ala Gly Ser Gln Thr Pro Gly Ser Glu Lys Pro  
 625 630 635 640  
 Gln Gly Met Phe Ala Pro Pro Gln Val Ser Ser Pro Val Gln Glu Lys  
 645 650 655  
 Arg Asp Ile Leu Pro Lys Asn Leu Pro Ala Glu Asp Arg Ala Leu Arg  
 660 665 670  
 Glu Lys Gly Pro Ser Gln Pro Pro Thr Ala Ala Gln Pro Ser Gly Pro  
 675 680 685  
 Val Asn Met Glu Glu Thr Arg Pro Glu Gly Gly Tyr Phe Ser Lys Tyr  
 690 695 700  
 Ser Glu Ala Ala Glu Leu Arg Ser Thr Ala Ser Leu Leu Ala Thr Gln  
 705 710 715 720  
 Glu Ser Asp Val Met Val Gly Pro Phe Lys Leu Arg Ser Arg Lys Gln  
 725 730 735  
 Arg Thr Leu Ser Met Ile Glu Glu Glu Ile Arg Ala Ala Gln Glu Arg



			740					745				750				
Glu	Glu	Glu	Leu	Lys	Arg	Gln	Arg	Gln	Val	Arg	Gln	Ser	Thr	Pro	Ser	
		755					760					765				
Pro	Arg	Ala	Lys	Asn	Ala	Pro	Ser	Leu	Pro	Ser	Arg	Thr	Thr	Cys	Tyr	
	770					775					780					
Lys	Thr	Ala	Pro	Gly	Lys	Ile	Glu	Lys	Val	Lys	Pro	Pro	Pro	Ser	Pro	
785					790					795					800	
Thr	Thr	Glu	Gly	Pro	Ser	Leu	Gln	Pro	Asp	Leu	Ala	Pro	Glu	Glu	Ala	
				805					810						815	
Ala	Gly	Thr	Gln	Arg	Pro	Lys	Asn	Leu	Met	Gln	Thr	Leu	Met	Glu	Asp	
			820					825					830			
Tyr	Glu	Thr	His	Lys	Ser	Lys	Arg	Arg	Glu	Arg	Met	Asp	Asp	Ser	Ser	
	835						840					845				
Tyr	Thr	Ser	Lys	Leu	Leu	Ser	Cys	Lys	Val	Thr	Ser	Glu	Val	Leu	Glu	
	850					855					860					
Ala	Thr	Arg	Val	Asn	Arg	Arg	Lys	Ser	Ala	Ser	Gly	Leu	Ala	Leu	Gly	
865					870					875					880	
Gly	Arg	Asp	Leu	Arg												
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<210> 11  
 <211> 3878  
 <212> PRT  
 <213> Homo sapiens

<400> 11

Met	Glu	Asp	Glu	Glu	Arg	Gln	Lys	Lys	Leu	Glu	Ala	Gly	Lys	Ala	Lys	
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Ile	Glu	Glu	Leu	Ser	Leu	Ala	Phe	Leu	Val	Arg	Gln	Leu	Ala	Gln	Phe	
			20					25					30			
Arg	Gln	Arg	Lys	Ala	Gln	Ser	Asp	Gly	Gln	Ser	Pro	Ser	Lys	Lys	Gln	
		35					40					45				
Lys	Lys	Lys	Arg	Lys	Thr	Ser	Ser	Ser	Lys	His	Asp	Val	Ser	Ala	His	
	50					55					60					
His	Asp	Leu	Asn	Ile	Asp	Gln	Ser	Gln	Cys	Asn	Glu	Met	Tyr	Ile	Asn	
65				70						75					80	
Ser	Ser	Gln	Arg	Val	Glu	Ser	Thr	Val	Ile	Pro	Glu	Ser	Thr	Ile	Met	
				85				90						95		
Arg	Thr	Leu	His	Ser	Gly	Glu	Ile	Thr	Ser	His	Glu	Gln	Gly	Phe	Ser	
			100					105					110			
Val	Glu	Leu	Glu	Ser	Glu	Ile	Ser	Thr	Thr	Ala	Asp	Asp	Cys	Ser	Ser	
		115					120					125				
Glu	Val	Asn	Gly	Cys	Ser	Phe	Val	Met	Arg	Thr	Gly	Lys	Pro	Thr	Asn	
	130					135					140					
Leu	Leu	Arg	Glu	Glu	Glu	Phe	Gly	Val	Asp	Asp	Ser	Tyr	Ser	Glu	Gln	
145					150					155					160	
Gly	Ala	Gln	Asp	Ser	Pro	Thr	His	Leu	Glu	Met	Met	Glu	Ser	Glu	Leu	
				165				170						175		
Ala	Gly	Lys	Gln	His	Glu	Ile	Glu	Glu	Leu	Asn	Arg	Glu	Leu	Glu	Glu	
			180					185					190			
Met	Arg	Val	Thr	Tyr	Gly	Thr	Glu	Gly	Leu	Gln	Gln	Leu	Gln	Glu	Phe	
		195					200					205				
Glu	Ala	Ala	Ile	Lys	Gln	Arg	Asp	Gly	Ile	Ile	Thr	Gln	Leu	Thr	Ala	
	210					215					220					
Asn	Leu	Gln	Gln	Ala	Arg	Arg	Glu	Lys	Asp	Glu	Thr	Met	Arg	Glu	Phe	
225					230					235					240	
Leu	Glu	Leu	Thr	Glu	Gln	Ser	Gln	Lys	Leu	Gln	Ile	Gln	Phe	Gln	Gln	
				245					250						255	
Leu	Gln	Ala	Ser	Glu	Thr	Leu	Arg	Asn	Ser	Thr	His	Ser	Ser	Thr	Ala	
			260					265					270			
Ala	Asp	Leu	Leu	Gln	Ala	Lys	Gln	Gln	Ile	Leu	Thr	His	Gln	Gln	Gln	
		275					280					285				

Leu	Glu	Glu	Gln	Asp	His	Leu	Leu	Glu	Asp	Tyr	Gln	Lys	Lys	Lys	Glu
290						295					300				
Asp	Phe	Thr	Met	Gln	Ile	Ser	Phe	Leu	Gln	Glu	Lys	Ile	Lys	Val	Tyr
305					310					315					320
Glu	Met	Glu	Gln	Asp	Lys	Lys	Val	Glu	Asn	Ser	Asn	Lys	Glu	Glu	Ile
				325					330					335	
Gln	Glu	Lys	Glu	Thr	Ile	Ile	Glu	Glu	Leu	Asn	Thr	Lys	Ile	Ile	Glu
			340					345					350		
Glu	Glu	Lys	Lys	Thr	Leu	Glu	Leu	Lys	Asp	Lys	Leu	Thr	Thr	Ala	Asp
		355					360					365			
Lys	Leu	Leu	Gly	Glu	Leu	Gln	Glu	Gln	Ile	Val	Gln	Lys	Asn	Gln	Glu
	370					375					380				
Ile	Lys	Asn	Met	Lys	Leu	Glu	Leu	Thr	Asn	Ser	Lys	Gln	Lys	Glu	Arg
385					390					395					400
Gln	Ser	Ser	Glu	Glu	Ile	Lys	Gln	Leu	Met	Gly	Thr	Val	Glu	Glu	Leu
				405					410					415	
Gln	Lys	Arg	Asn	His	Lys	Asp	Ser	Gln	Phe	Glu	Thr	Asp	Ile	Val	Gln
			420					425					430		
Arg	Met	Glu	Gln	Glu	Thr	Gln	Arg	Lys	Leu	Glu	Gln	Leu	Arg	Ala	Glu
	435						440					445			
Leu	Asp	Glu	Met	Tyr	Gly	Gln	Gln	Ile	Val	Gln	Met	Lys	Gln	Glu	Leu
	450					455					460				
Ile	Arg	Gln	His	Met	Ala	Gln	Met	Glu	Glu	Met	Lys	Thr	Arg	His	Lys
465					470					475					480
Gly	Glu	Met	Glu	Asn	Ala	Leu	Arg	Ser	Tyr	Ser	Asn	Ile	Thr	Val	Asn
				485					490					495	
Glu	Asp	Gln	Ile	Lys	Leu	Met	Asn	Val	Ala	Ile	Asn	Glu	Leu	Asn	Ile
			500					505					510		
Lys	Leu	Gln	Asp	Thr	Asn	Ser	Gln	Lys	Glu	Lys	Leu	Lys	Glu	Glu	Leu
	515						520					525			
Gly	Leu	Ile	Leu	Glu	Glu	Lys	Cys	Ala	Leu	Gln	Arg	Gln	Leu	Glu	Asp
	530					535					540				
Leu	Val	Glu	Glu	Leu	Ser	Phe	Ser	Arg	Glu	Gln	Ile	Gln	Arg	Ala	Arg
545					550					555					560
Gln	Thr	Ile	Ala	Glu	Gln	Glu	Ser	Lys	Leu	Asn	Glu	Ala	His	Lys	Ser
				565					570					575	
Leu	Ser	Thr	Val	Glu	Asp	Leu	Lys	Ala	Glu	Ile	Val	Ser	Ala	Ser	Glu
			580					585					590		
Ser	Arg	Lys	Glu	Leu	Glu	Leu	Lys	His	Glu	Ala	Glu	Val	Thr	Asn	Tyr
	595						600					605			
Lys	Ile	Lys	Leu	Glu	Met	Leu	Glu	Lys	Glu	Lys	Asn	Ala	Val	Leu	Asp
	610					615					620				
Arg	Met	Ala	Glu	Ser	Gln	Glu	Ala	Glu	Leu	Glu	Arg	Leu	Arg	Thr	Gln
625					630					635					640
Leu	Leu	Phe	Ser	His	Glu	Glu	Glu	Leu	Ser	Lys	Leu	Lys	Glu	Asp	Leu
				645					650					655	
Glu	Ile	Glu	His	Arg	Ile	Asn	Ile	Glu	Lys	Leu	Lys	Asp	Asn	Leu	Gly
			660					665					670		
Ile	His	Tyr	Lys	Gln	Gln	Ile	Asp	Gly	Leu	Gln	Asn	Glu	Met	Ser	Gln
	675						680					685			
Lys	Ile	Glu	Thr	Met	Gln	Phe	Glu	Lys	Asp	Asn	Leu	Ile	Thr	Lys	Gln
	690					695					700				
Asn	Gln	Leu	Ile	Leu	Glu	Ile	Ser	Lys	Leu	Lys	Asp	Leu	Gln	Gln	Ser
705					710					715					720
Leu	Val	Asn	Ser	Lys	Ser	Glu	Glu	Met	Thr	Leu	Gln	Ile	Asn	Glu	Leu
				725					730					735	
Gln	Lys	Glu	Ile	Glu	Ile	Leu	Arg	Gln	Glu	Glu	Lys	Glu	Lys	Gly	Thr
			740					745					750		
Leu	Glu	Gln	Glu	Val	Gln	Glu	Leu	Gln	Leu	Lys	Thr	Glu	Leu	Leu	Glu
	755						760					765			
Lys	Gln	Met	Lys	Glu	Lys	Glu	Asn	Asp	Leu	Gln	Glu	Lys	Phe	Ala	Gln
	770					775					780				
Leu	Glu	Ala	Glu	Asn	Ser	Ile	Leu	Lys	Asp	Glu	Lys	Lys	Thr	Leu	Glu

785					790					795				800
Asp	Met	Leu	Lys	Ile	His	Thr	Pro	Val	Ser	Gln	Glu	Glu	Arg	Leu
				805					810					815
Phe	Leu	Asp	Ser	Ile	Lys	Ser	Lys	Ser	Lys	Asp	Ser	Val	Trp	Glu
			820					825					830	Lys
Glu	Ile	Glu	Ile	Leu	Ile	Glu	Glu	Asn	Glu	Asp	Leu	Lys	Gln	Gln
		835					840					845		Cys
Ile	Gln	Leu	Asn	Glu	Glu	Ile	Glu	Lys	Gln	Arg	Asn	Thr	Phe	Ser
	850					855					860			Phe
Ala	Glu	Lys	Asn	Phe	Glu	Val	Asn	Tyr	Gln	Glu	Leu	Gln	Glu	Glu
	865				870					875				Tyr
Ala	Cys	Leu	Leu	Lys	Val	Lys	Asp	Asp	Leu	Glu	Asp	Ser	Lys	Asn
			885					890						Lys
Gln	Glu	Leu	Glu	Tyr	Lys	Ser	Lys	Leu	Lys	Ala	Leu	Asn	Glu	Glu
		900						905					910	Leu
His	Leu	Gln	Arg	Ile	Asn	Pro	Thr	Thr	Val	Lys	Met	Lys	Ser	Ser
	915						920					925		Val
Phe	Asp	Glu	Asp	Lys	Thr	Phe	Val	Ala	Glu	Thr	Leu	Glu	Met	Gly
	930					935					940			Glu
Val	Val	Glu	Lys	Asp	Thr	Thr	Glu	Leu	Met	Glu	Lys	Leu	Glu	Val
	945				950					955				Thr
Lys	Arg	Glu	Lys	Leu	Glu	Leu	Ser	Gln	Arg	Leu	Ser	Asp	Leu	Ser
			965					970						Glu
Gln	Leu	Lys	Gln	Lys	His	Gly	Glu	Ile	Ser	Phe	Leu	Asn	Glu	Glu
		980					985					990		Val
Lys	Ser	Leu	Lys	Gln	Glu	Lys	Glu	Gln	Val	Ser	Leu	Arg	Cys	Arg
	995						1000					1005		Glu
Leu	Glu	Ile	Ile	Ile	Asn	His	Asn	Arg	Ala	Glu	Asn	Val	Gln	Ser
	1010					1015					1020			Cys
Asp	Thr	Gln	Val	Ser	Ser	Leu	Leu	Asp	Gly	Val	Val	Thr	Met	Thr
	1025				1030					1035				Ser
Arg	Gly	Ala	Glu	Gly	Ser	Val	Ser	Lys	Val	Asn	Lys	Ser	Phe	Gly
			1045						1050					Glu
Glu	Ser	Lys	Ile	Met	Val	Glu	Asp	Lys	Val	Ser	Phe	Glu	Asn	Met
		1060					1065					1070		Thr
Val	Gly	Glu	Glu	Ser	Lys	Gln	Glu	Gln	Leu	Ile	Leu	Asp	His	Leu
	1075					1080						1085		Pro
Ser	Val	Thr	Lys	Glu	Ser	Ser	Leu	Arg	Ala	Thr	Gln	Pro	Ser	Glu
	1090				1095						1100			Asn
Asp	Lys	Leu	Gln	Lys	Glu	Leu	Asn	Val	Leu	Lys	Ser	Glu	Gln	Asn
	1105				1110					1115				Asp
Leu	Arg	Leu	Gln	Met	Glu	Ala	Gln	Arg	Ile	Cys	Leu	Ser	Leu	Val
			1125					1130						Tyr
Ser	Thr	His	Val	Asp	Gln	Val	Arg	Glu	Tyr	Met	Glu	Asn	Glu	Lys
		1140					1145					1150		Asp
Lys	Ala	Leu	Cys	Ser	Leu	Lys	Glu	Glu	Leu	Ile	Phe	Ala	Gln	Glu
	1155					1160					1165			Glu
Lys	Ile	Lys	Glu	Leu	Gln	Lys	Ile	His	Gln	Leu	Glu	Leu	Gln	Thr
	1170				1175						1180			Met
Lys	Thr	Gln	Glu	Thr	Gly	Asp	Glu	Gly	Lys	Pro	Leu	His	Leu	Leu
	1185				1190				1195					Ile
Gly	Lys	Leu	Gln	Lys	Ala	Val	Ser	Glu	Glu	Cys	Ser	Tyr	Phe	Leu
			1205						1210					Gln
Thr	Leu	Cys	Ser	Val	Leu	Gly	Glu	Tyr	Tyr	Thr	Pro	Ala	Leu	Lys
		1220					1225					1230		Cys
Glu	Val	Asn	Ala	Glu	Asp	Lys	Glu	Asn	Ser	Gly	Asp	Tyr	Ile	Ser
	1235					1240					1245			Glu
Asn	Glu	Asp	Pro	Glu	Leu	Gln	Asp	Tyr	Arg	Tyr	Glu	Val	Gln	Asp
	1250					1255				1260				Phe
Gln	Glu	Asn	Met	His	Thr	Leu	Leu	Asn	Lys	Val	Thr	Glu	Glu	Tyr
	1265				1270				1275					Asn
Lys	Leu	Leu	Val	Leu	Gln	Thr	Arg	Leu	Ser	Lys	Ile	Trp	Gly	Gln
			1285					1290						Gln

Thr	Asp	Gly	Met	Lys	Leu	Glu	Phe	Gly	Glu	Glu	Asn	Leu	Pro	Lys	Glu	
			1300					1305					1310			
Glu	Thr	Glu	Phe	Leu	Ser	Ile	His	Ser	Gln	Met	Thr	Asn	Leu	Glu	Asp	
		1315					1320					1325				
Ile	Asp	Val	Asn	His	Lys	Ser	Lys	Leu	Ser	Ser	Leu	Gln	Asp	Leu	Glu	
	1330					1335					1340					
Lys	Thr	Lys	Leu	Glu	Glu	Gln	Val	Gln	Glu	Leu	Glu	Ser	Leu	Ile	Ser	
1345					1350				1355						1360	
Ser	Leu	Gln	Gln	Gln	Leu	Lys	Glu	Thr	Glu	Gln	Asn	Tyr	Glu	Ala	Glu	
			1365					1370							1375	
Ile	His	Cys	Leu	Gln	Lys	Arg	Leu	Gln	Ala	Val	Ser	Glu	Ser	Thr	Val	
			1380					1385						1390		
Pro	Pro	Ser	Leu	Pro	Val	Asp	Ser	Val	Val	Ile	Thr	Glu	Ser	Asp	Ala	
	1395						1400					1405				
Gln	Arg	Thr	Met	Tyr	Pro	Gly	Ser	Cys	Val	Lys	Lys	Asn	Ile	Asp	Gly	
	1410					1415					1420					
Thr	Ile	Glu	Phe	Ser	Gly	Glu	Phe	Gly	Val	Lys	Glu	Glu	Thr	Asn	Ile	
1425					1430					1435					1440	
Val	Lys	Leu	Leu	Glu	Lys	Gln	Tyr	Gln	Glu	Gln	Leu	Glu	Glu	Glu	Val	
			1445					1450							1455	
Ala	Lys	Val	Ile	Val	Ser	Met	Ser	Ile	Ala	Phe	Ala	Gln	Gln	Thr	Glu	
			1460					1465						1470		
Leu	Ser	Arg	Ile	Ser	Gly	Gly	Lys	Glu	Asn	Thr	Ala	Ser	Ser	Lys	Gln	
	1475						1480					1485				
Ala	His	Ala	Val	Cys	Gln	Gln	Glu	Gln	His	Tyr	Phe	Asn	Glu	Met	Lys	
	1490					1495					1500					
Leu	Ser	Gln	Asp	Gln	Ile	Gly	Phe	Gln	Thr	Phe	Glu	Thr	Val	Asp	Val	
1505					1510				1515						1520	
Lys	Phe	Lys	Glu	Glu	Phe	Lys	Pro	Leu	Ser	Lys	Glu	Leu	Gly	Glu	His	
			1525					1530							1535	
Gly	Lys	Glu	Ile	Leu	Leu	Ser	Asn	Ser	Asp	Pro	His	Asp	Ile	Pro	Glu	
		1540						1545					1550			
Ser	Lys	Asp	Cys	Val	Leu	Thr	Ile	Ser	Glu	Glu	Met	Phe	Ser	Lys	Asp	
	1555						1560					1565				
Lys	Thr	Phe	Ile	Val	Arg	Gln	Ser	Ile	His	Asp	Glu	Ile	Ser	Val	Ser	
	1570					1575					1580					
Ser	Met	Asp	Ala	Ser	Arg	Gln	Leu	Met	Leu	Asn	Glu	Glu	Gln	Leu	Glu	
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Asp	Met	Arg	Gln	Glu	Leu	Val	Arg	Gln	Tyr	Gln	Glu	His	Gln	Gln	Ala	
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Thr	Gln	Arg	Ser	Ser	Ile	Asp	Asn	Glu	Asn	Leu	Val	Ser	Glu	Arg	Glu	
		1620						1625						1630		
Arg	Val	Leu	Leu	Glu	Glu	Leu	Glu	Ala	Leu	Lys	Gln	Leu	Ser	Leu	Ala	
	1635							1640						1645		
Gly	Arg	Glu	Lys	Leu	Cys	Cys	Glu	Leu	Arg	Asn	Ser	Ser	Thr	Gln	Thr	
	1650					1655					1660					
Gln	Asn	Gly	Asn	Glu	Asn	Gln	Gly	Glu	Val	Glu	Glu	Gln	Thr	Phe	Lys	
1665					1670					1675					1680	
Glu	Lys	Glu	Leu	Asp	Arg	Lys	Pro	Glu	Asp	Val	Pro	Pro	Glu	Ile	Leu	
			1685					1690							1695	
Ser	Asn	Glu	Arg	Tyr	Ala	Leu	Gln	Lys	Ala	Asn	Asn	Arg	Leu	Leu	Lys	
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Ile	Leu	Leu	Glu	Val	Val	Lys	Thr	Thr	Ala	Ala	Val	Glu	Glu	Thr	Ile	
	1715						1720					1725				
Gly	Arg	His	Val	Leu	Gly	Ile	Leu	Asp	Arg	Ser	Ser	Lys	Ser	Gln	Ser	
	1730					1735					1740					
Ser	Ala	Ser	Leu	Ile	Trp	Arg	Ser	Glu	Ala	Glu	Ala	Ser	Val	Lys	Ser	
1745					1750				1755						1760	
Cys	Val	His	Glu	Glu	His	Thr	Arg	Val	Thr	Asp	Glu	Ser	Ile	Pro	Ser	
			1765					1770							1775	
Tyr	Ser	Gly	Ser	Asp	Met	Pro	Arg	Asn	Asp	Ile	Asn	Met	Trp	Ser	Lys	
		1780						1785					1790			
Val	Thr	Glu	Glu	Gly	Thr	Glu	Leu	Ser	Gln	Arg	Leu	Val	Arg	Ser	Gly	



Asp	Leu	Glu	Thr	Gln	Ile	Glu	Cys	Leu	Met	Ser	Asp	Gln	Glu	Cys	Val	2305	2310	2315	2320
Lys	Arg	Asn	Arg	Glu	Glu	Glu	Ile	Glu	Gln	Leu	Asn	Glu	Val	Ile	Glu	2325	2330	2335	
Lys	Leu	Gln	Gln	Glu	Leu	Ala	Asn	Ile	Gly	Gln	Lys	Thr	Ser	Met	Asn	2340	2345	2350	
Ala	His	Ser	Leu	Ser	Glu	Glu	Ala	Asp	Ser	Leu	Lys	His	Gln	Leu	Asp	2355	2360	2365	
Val	Val	Ile	Ala	Glu	Lys	Leu	Ala	Leu	Glu	Gln	Gln	Val	Glu	Thr	Ala	2370	2375	2380	
Asn	Glu	Glu	Met	Thr	Phe	Met	Lys	Asn	Val	Leu	Lys	Glu	Thr	Asn	Phe	2385	2390	2395	2400
Lys	Met	Asn	Gln	Leu	Thr	Gln	Glu	Leu	Phe	Ser	Leu	Lys	Arg	Glu	Arg	2405	2410	2415	
Glu	Ser	Val	Glu	Lys	Ile	Gln	Ser	Ile	Pro	Glu	Asn	Ser	Val	Asn	Val	2420	2425	2430	
Ala	Ile	Asp	His	Leu	Ser	Lys	Asp	Lys	Pro	Glu	Leu	Glu	Val	Val	Leu	2435	2440	2445	
Thr	Glu	Asp	Ala	Leu	Lys	Ser	Leu	Glu	Asn	Gln	Thr	Tyr	Phe	Lys	Ser	2450	2455	2460	
Phe	Glu	Glu	Asn	Gly	Lys	Gly	Ser	Ile	Ile	Asn	Leu	Glu	Thr	Arg	Leu	2465	2470	2475	2480
Leu	Gln	Leu	Glu	Ser	Thr	Val	Ser	Ala	Lys	Asp	Leu	Glu	Leu	Thr	Gln	2485	2490	2495	
Cys	Tyr	Lys	Gln	Ile	Lys	Asp	Met	Gln	Glu	Gln	Gly	Gln	Phe	Glu	Thr	2500	2505	2510	
Glu	Met	Leu	Gln	Lys	Lys	Ile	Val	Asn	Leu	Gln	Lys	Ile	Val	Glu	Glu	2515	2520	2525	
Lys	Val	Ala	Ala	Ala	Leu	Val	Ser	Gln	Ile	Gln	Leu	Glu	Ala	Val	Gln	2530	2535	2540	
Glu	Tyr	Ala	Lys	Phe	Cys	Gln	Asp	Asn	Gln	Thr	Ile	Ser	Ser	Glu	Pro	2545	2550	2555	2560
Glu	Arg	Thr	Asn	Ile	Gln	Asn	Leu	Asn	Gln	Leu	Arg	Glu	Asp	Glu	Leu	2565	2570	2575	
Gly	Ser	Asp	Ile	Ser	Ala	Leu	Thr	Leu	Arg	Ile	Ser	Glu	Leu	Glu	Ser	2580	2585	2590	
Gln	Val	Val	Glu	Met	His	Thr	Ser	Leu	Ile	Leu	Glu	Lys	Glu	Gln	Val	2595	2600	2605	
Glu	Ile	Ala	Glu	Lys	Asn	Val	Leu	Glu	Lys	Glu	Lys	Lys	Leu	Leu	Glu	2610	2615	2620	
Leu	Gln	Lys	Leu	Leu	Glu	Gly	Asn	Glu	Lys	Lys	Gln	Arg	Glu	Lys	Glu	2625	2630	2635	2640
Lys	Lys	Arg	Ser	Pro	Gln	Asp	Val	Glu	Val	Leu	Lys	Thr	Thr	Thr	Glu	2645	2650	2655	
Leu	Phe	His	Ser	Asn	Glu	Glu	Ser	Gly	Phe	Phe	Asn	Glu	Leu	Glu	Ala	2660	2665	2670	
Leu	Arg	Ala	Glu	Ser	Val	Ala	Thr	Lys	Ala	Glu	Leu	Ala	Ser	Tyr	Lys	2675	2680	2685	
Glu	Lys	Ala	Glu	Lys	Leu	Gln	Glu	Glu	Leu	Leu	Val	Lys	Glu	Thr	Asn	2690	2695	2700	
Met	Thr	Ser	Leu	Gln	Lys	Asp	Leu	Ser	Gln	Val	Arg	Asp	His	Leu	Ala	2705	2710	2715	2720
Glu	Ala	Lys	Glu	Lys	Leu	Ser	Ile	Leu	Glu	Lys	Glu	Asp	Glu	Thr	Glu	2725	2730	2735	
Val	Gln	Glu	Ser	Lys	Lys	Ala	Cys	Met	Phe	Glu	Pro	Leu	Pro	Ile	Lys	2740	2745	2750	
Leu	Ser	Lys	Ser	Ile	Ala	Ser	Gln	Thr	Asp	Gly	Thr	Leu	Lys	Ile	Ser	2755	2760	2765	
Ser	Ser	Asn	Gln	Thr	Pro	Gln	Ile	Leu	Val	Lys	Asn	Ala	Gly	Ile	Gln	2770	2775	2780	
Ile	Asn	Leu	Gln	Ser	Glu	Cys	Ser	Ser	Glu	Glu	Val	Thr	Glu	Ile	Ile	2785	2790	2795	2800
Ser	Gln	Phe	Thr	Glu	Lys	Ile	Glu	Lys	Met	Gln	Glu	Leu	His	Ala	Ala				



Glu Asp Leu Leu Lys Glu Leu Gln Lys Gln Leu Glu Glu Lys His Ser  
 3315 3320 3325  
 Arg Ile Val Glu Leu Leu Asn Glu Thr Glu Lys Tyr Lys Leu Asp Ser  
 3330 3335 3340  
 Leu Gln Thr Arg Gln Gln Met Glu Lys Asp Arg Gln Val His Arg Lys  
 3345 3350 3355 3360  
 Thr Leu Gln Thr Glu Gln Glu Ala Asn Thr Glu Gly Gln Lys Lys Met  
 3365 3370 3375  
 His Glu Leu Gln Ser Lys Val Glu Asp Leu Gln Arg Gln Leu Glu Glu  
 3380 3385 3390  
 Lys Arg Gln Gln Val Tyr Lys Leu Asp Leu Glu Gly Gln Arg Leu Gln  
 3395 3400 3405  
 Gly Ile Met Gln Glu Phe Gln Lys Gln Glu Leu Glu Arg Glu Glu Lys  
 3410 3415 3420  
 Arg Glu Ser Arg Arg Ile Leu Tyr Gln Asn Leu Asn Glu Pro Thr Thr  
 3425 3430 3435 3440  
 Trp Ser Leu Thr Ser Asp Arg Thr Arg Asn Trp Val Leu Gln Gln Lys  
 3445 3450 3455  
 Ile Glu Gly Glu Thr Lys Glu Ser Asn Tyr Ala Lys Leu Ile Glu Met  
 3460 3465 3470  
 Asn Gly Gly Thr Gly Cys Asn His Glu Leu Glu Met Ile Arg Gln  
 3475 3480 3485  
 Lys Leu Gln Cys Val Ala Ser Lys Leu Gln Val Leu Pro Gln Lys Ala  
 3490 3495 3500  
 Ser Glu Arg Leu Gln Phe Glu Thr Ala Asp Asp Glu Asp Phe Ile Trp  
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 Val Gln Glu Asn Ile Asp Glu Ile Ile Leu Gln Leu Gln Lys Leu Thr  
 3525 3530 3535  
 Gly Gln Gln Gly Glu Glu Pro Ser Leu Val Ser Pro Ser Thr Ser Cys  
 3540 3545 3550  
 Gly Ser Leu Thr Glu Arg Leu Leu Arg Gln Asn Ala Glu Leu Thr Gly  
 3555 3560 3565  
 His Ile Ser Gln Leu Thr Glu Glu Lys Asn Asp Leu Arg Asn Met Val  
 3570 3575 3580  
 Met Lys Leu Glu Glu Gln Ile Arg Trp Tyr Arg Gln Thr Gly Ala Gly  
 3585 3590 3595 3600  
 Arg Asp Asn Ser Ser Arg Phe Ser Leu Asn Gly Gly Ala Asn Ile Glu  
 3605 3610 3615  
 Ala Ile Ile Ala Ser Glu Lys Glu Val Trp Asn Arg Glu Lys Leu Thr  
 3620 3625 3630  
 Leu Gln Lys Ser Leu Lys Arg Ala Glu Ala Glu Val Tyr Lys Leu Lys  
 3635 3640 3645  
 Ala Glu Leu Arg Asn Asp Ser Leu Leu Gln Thr Leu Ser Pro Asp Ser  
 3650 3655 3660  
 Glu His Val Thr Leu Lys Arg Ile Tyr Gly Lys Tyr Leu Arg Ala Glu  
 3665 3670 3675 3680  
 Ser Phe Arg Lys Ala Leu Ile Tyr Gln Lys Lys Tyr Leu Leu Leu Leu  
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 Leu Gly Gly Phe Gln Glu Cys Glu Asp Ala Thr Leu Ala Leu Leu Ala  
 3700 3705 3710  
 Arg Met Gly Gly Gln Pro Ala Phe Thr Asp Leu Glu Val Ile Thr Asn  
 3715 3720 3725  
 Arg Pro Lys Gly Phe Thr Arg Phe Arg Ser Ala Val Arg Val Ser Ile  
 3730 3735 3740  
 Ala Ile Ser Arg Met Lys Phe Leu Val Arg Arg Trp His Arg Val Thr  
 3745 3750 3755 3760  
 Gly Ser Val Ser Ile Asn Ile Asn Arg Asp Gly Phe Gly Leu Asn Gln  
 3765 3770 3775  
 Gly Ala Glu Lys Thr Asp Ser Phe Tyr His Ser Ser Gly Gly Leu Glu  
 3780 3785 3790  
 Leu Tyr Gly Glu Pro Arg His Thr Thr Tyr Arg Ser Arg Ser Asp Leu  
 3795 3800 3805  
 Asp Tyr Ile Arg Ser Pro Leu Pro Phe Gln Asn Arg Tyr Pro Gly Thr



3810	3815	3820
Pro Ala Asp Phe Asn Pro Gly Ser Leu Ala Cys Ser Gln Leu Gln Asn		
3825	3830	3835
Tyr Asp Pro Asp Arg Ala Leu Thr Asp Tyr Ile Thr Arg Leu Glu Ala		3840
	3845	3850
Leu Gln Arg Arg Leu Gly Thr Ile Gln Ser Gly Ser Thr Thr Gln Phe		3855
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His Ala Gly Met Arg Arg		3870
3875		

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 <212> PRT  
 <213> Oryctolagus cuniculus

<400> 12

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Leu Gln Lys Gln Val Lys Ala Leu Glu Ile Asp Val Glu Glu Gln Val	
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Cys Arg Phe Ile Glu Leu Glu Gln Glu Lys Asn Ala Glu Leu Met Asp	
	35
Leu Arg Gln Gln Asn Gln Ala Leu Glu Lys Gln Leu Glu Lys Met Arg	
	50
Lys Met Asp Leu Arg Gln Gln Asn Gln Ala Leu Glu Lys Gln Leu Glu	
65	70
Lys Met Arg Lys Phe Leu Asp Glu Gln Ala Ile Asp Arg Glu His Glu	
	85
Arg Asp Val Phe Gln Gln Glu Ile Gln Lys Leu Glu Gln Gln Leu Lys	
	100
Leu Val Pro Arg Phe Gln Pro Ile Ser Glu His Gln Thr Arg Glu Val	
	115
Glu Gln Leu Thr Asn His Leu Lys Glu Lys Thr Asp Lys Cys Ser Glu	
	130
Leu Leu Leu Ser Lys Glu Gln Leu Gln Arg Asp Val Gln Glu Arg Asn	
145	150
Glu Glu Ile Glu Lys Leu Glu Cys Arg Val Arg Glu Leu Glu Gln Ala	
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Leu Leu Ser Val Gln Thr Leu Ser Lys Arg Trp Arg Thr Arg Asn Ser	
	180
Phe Gly Ala Val Glu Pro Lys Ala Glu Leu Cys Leu Glu Val Gln Leu	
	195
Gln Ala Glu Arg Asp Ala Ile Asp Arg Lys Glu Lys Glu Ile Thr Asn	
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Leu Glu Glu Gln Leu Glu Gln Phe Arg Glu Glu Leu Glu Asn Lys Asn	
225	230
Glu Glu Val Gln Gln Leu His Met Gln Leu Glu Ile Gln Lys Lys Glu	
	245
Ser Thr Thr Arg Leu Gln Glu Leu Glu Gln Glu Asn Lys Leu Phe Lys	
	260
Asp Glu Met Glu Lys Leu Gly Phe Ala Ile Lys Glu Ser Asp Ala Val	
	275
Ser Pro Gln Asp Gln Gln Val Leu Phe Gly Lys Phe Ala Gln Ile Ile	
	290
His Glu Lys Glu Val Glu Ile Asp Arg Leu Asn Glu Gln Ile Ile Lys	
305	310
Leu Gln Gln Gln Leu Lys Ile Thr Thr Asp Asn Lys Val Ile Glu Glu	
	325
Lys Asn Glu Leu Ile Arg Asp Leu Glu Ala Gln Ile Glu Cys Leu Met	
	340
Ser Asp Gln Glu Arg Val Arg Lys Asn Arg Glu Glu Glu Ile Glu Gln	
	355
	360
	365

Leu	Asn	Glu	Val	Ile	Glu	Lys	Leu	Gln	Gln	Glu	Leu	Ala	Asn	Ile	Asp
370						375					380				
Gln	Lys	Thr	Ser	Val	Asp	Pro	Ser	Ser	Leu	Ser	Glu	Glu	Ala	Asp	Ser
385					390					395					400
Leu	Lys	His	Gln	Leu	Asp	Lys	Val	Ile	Ala	Glu	Lys	Leu	Ala	Leu	Glu
				405					410					415	
His	Gln	Val	Glu	Thr	Thr	Asn	Glu	Glu	Met	Ala	Val	Thr	Lys	Asn	Val
			420					425					430		
Leu	Lys	Glu	Thr	Asn	Phe	Lys	Met	Asn	Gln	Leu	Thr	Gln	Glu	Leu	Cys
		435				440						445			
Ser	Leu	Lys	Arg	Glu	Arg	Glu	Lys	Met	Glu	Arg	Ile	Gln	Ser	Val	Pro
	450					455					460				
Glu	Lys	Ser	Val	Asn	Met	Ser	Val	Gly	Asp	Leu	Ser	Lys	Asp	Lys	Pro
465					470					475					480
Glu	Met	Asp	Leu	Ile	Pro	Thr	Glu	Asp	Ala	Leu	Ala	Gln	Leu	Glu	Thr
				485					490					495	
Gln	Thr	Gln	Leu	Arg	Ser	Ser	Glu	Glu	Ser	Ser	Lys	Val	Ser	Leu	Ser
			500					505					510		
Ser	Leu	Glu	Thr	Lys	Leu	Leu	Gln	Leu	Glu	Ser	Thr	Val	Ser	Thr	Lys
	515						520					525			
Asp	Leu	Glu	Leu	Thr	Gln	Cys	Tyr	Lys	Gln	Ile	Gln	Asp	Met	Arg	Glu
	530					535					540				
Gln	Gly	Arg	Ser	Glu	Thr	Glu	Met	Leu	Gln	Thr	Lys	Ile	Val	Ser	Leu
545					550					555					560
Gln	Lys	Val	Leu	Glu	Glu	Lys	Val	Ala	Ala	Ala	Leu	Val	Ser	Gln	Val
				565					570					575	
Gln	Leu	Glu	Ala	Val	Gln	Glu	Tyr	Val	Lys	Leu	Cys	Ala	Asp	Lys	Pro
			580					585					590		
Ala	Val	Ser	Ser	Asp	Pro	Ala	Arg	Thr	Glu	Val	Pro	Gly	Leu	Ser	Gln
	595					600						605			
Leu	Ala	Gly	Asn	Thr	Met	Glu	Ser	Asp	Val	Ser	Ala	Leu	Thr	Trp	Arg
	610					615					620				
Ile	Ser	Glu	Leu	Glu	Ser	Gln	Leu	Val	Glu	Met	His	Ser	Ser	Leu	Ile
625					630					635					640
Ser	Glu	Lys	Glu	Gln	Val	Glu	Ile	Ala	Glu	Lys	Asn	Ala	Leu	Glu	Lys
				645					650					655	
Glu	Lys	Lys	Leu	Gln	Glu	Leu	Gln	Lys	Leu	Val	Gln	Asp	Ser	Glu	Thr
			660					665					670		
Lys	Gln	Arg	Glu	Arg	Glu	Arg	Gln	Ser	Arg	Leu	His	Gly	Asp	Leu	Gly
		675					680					685			
Val	Leu	Glu	Ser	Thr	Thr	Ser	Glu	Glu	Ser	Gly	Val	Phe	Gly	Glu	Leu
	690					695					700				
Glu	Ala	Leu	Arg	Ala	Glu	Ser	Ala	Ala	Pro	Lys	Gly	Glu	Leu	Ala	Asn
705					710					715					720
Tyr	Lys	Glu	Leu	Ala	Glu	Lys	Leu	Gln	Glu	Glu	Leu	Leu	Val	Lys	Glu
				725					730					735	
Thr	Asn	Met	Ala	Ser	Leu	Pro	Lys	Glu	Leu	Ser	His	Val	Arg	Asp	Gln
			740					745					750		
Leu	Thr	Glu	Ala	Glu	Asp	Lys	Leu	Ser	His	Phe	Ser	Glu	Lys	Glu	Asp
		755					760					765			
Lys	Thr	Glu	Val	Gln	Glu	His	Gly	Thr	Ile	Cys	Ile	Leu	Glu	Pro	Cys
	770					775					780				
Pro	Gly	Gln	Ile	Gly	Glu	Ser	Phe	Ala	Ser	Gln	Thr	Glu	Gly	Ala	Val
785					790					795					800
Gln	Val	Asn	Ser	His	Thr	Gln	Thr	Pro	Gln	Ile	Pro	Val	Arg	Ser	Val
				805					810					815	
Gly	Ile	Gln	Thr	His	Ser	Gln	Ser	Asp	Ser	Ser	Pro	Glu	Glu	Val	Ala
			820					825					830		
Glu	Ile	Ile	Ser	Arg	Phe	Thr	Glu	Lys	Ile	Glu	Gln	Met	Arg	Glu	Leu
		835					840					845			
His	Ala	Ala	Glu	Ile	Leu	Asp	Met	Glu	Ser	Arg	His	Ile	Ser	Glu	Thr
	850					855					860				
Glu	Thr	Leu	Lys	Arg	Glu	His	Cys	Ile	Ala	Val	Gln	Leu	Leu	Thr	Glu

865					870					875					880
Glu	Cys	Ala	Ser	Leu	Lys	Ser	Leu	Ile	Gln	Gly	Leu	Arg	Met	Pro	Glu
				885					890					895	
Gly	Ser	Ser	Val	Pro	Glu	Leu	Thr	His	Ser	Asn	Ala	Tyr	Gln	Thr	Arg
			900					905					910		
Glu	Val	Gly	Ser	Ser	Asp	Ser	Gly	Ser	Asp	Trp	Gly	Gln	Gly	Ile	Tyr
		915					920					925			
Leu	Thr	Gln	Ser	Gln	Gly	Phe	Asp	Thr	Ala	Ser	Glu	Ala	Arg	Gly	Glu
		930				935					940				
Glu	Gly	Glu	Thr	Ser	Thr	Asp	Ser	Phe	Pro	Lys	Lys	Ile	Lys	Gly	Leu
945					950				955						960
Leu	Arg	Ala	Val	His	Asn	Glu	Gly	Met	Gln	Val	Leu	Ser	Leu	Thr	Glu
				965					970					975	
Gly	Pro	Cys	Gly	Asp	Gly	Glu	Asp	Tyr	Pro	Gly	His	Gln	Leu	Ser	Glu
			980					985					990		
Ser	Trp	Leu	Glu	Glu	Arg	Arg	Ala	Tyr	Leu	Ser	Thr	Ile	Ser	Ser	Leu
		995					1000					1005			
Lys	Asp	Phe	Ile	Thr	Lys	Met	Gln	Val	Gln	Arg	Glu	Val	Glu	Val	Tyr
1010						1015			1020						
Asp	Ser	Ser	Gln	Ser	His	Glu	Asn	Ile	Ser	Asp	Trp	Arg	Gly	Glu	Leu
1025					1030				1035						1040
Leu	Leu	Ala	Leu	Gln	Gln	Val	Phe	Leu	Arg	Glu	Arg	Ser	Val	Leu	Leu
				1045				1050						1055	
Ala	Ala	Phe	Lys	Thr	Glu	Leu	Thr	Ala	Leu	Gly	Thr	Arg	Asp	Ala	Ala
			1060				1065						1070		
Gly	Leu	Leu	Asn	Cys	Leu	Glu	Gln	Arg	Ile	Pro	Arg	Thr	Glu	Tyr	
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<210> 13  
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 <212> PRT  
 <213> *Drosophila melanogaster*  
 <400> 13

Met	Asp	Ser	Asp	Asn	Asp	Asn	Asp	Phe	Cys	Asp	Asn	Val	Asp	Ser	Gly
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Asn	Val	Ser	Ser	Gly	Asp	Asp	Gly	Asp	Asp	Asp	Phe	Gly	Met	Glu	Val
			20				25					30			
Asp	Leu	Pro	Ser	Ser	Ala	Asp	Arg	Gln	Met	Asp	Gln	Asp	Asp	Tyr	Gln
		35					40				45				
Tyr	Lys	Val	Leu	Thr	Thr	Asp	Glu	Ile	Val	Gln	His	Gln	Arg	Glu	Ile
50					55					60					
Ile	Asp	Glu	Ala	Asn	Leu	Leu	Leu	Lys	Leu	Pro	Thr	Pro	Thr	Thr	Arg
65					70				75						80
Ile	Leu	Leu	Asn	His	Phe	Lys	Trp	Asp	Lys	Glu	Lys	Leu	Leu	Glu	Lys
			85					90						95	
Tyr	Phe	Asp	Asp	Asn	Thr	Asp	Glu	Phe	Phe	Lys	Cys	Ala	His	Val	Ile
			100				105						110		
Asn	Pro	Phe	Asn	Ala	Thr	Glu	Ala	Ile	Lys	Gln	Lys	Thr	Ser	Arg	Ser
		115					120					125			
Gln	Cys	Glu	Glu	Cys	Glu	Ile	Cys	Phe	Ser	Gln	Leu	Pro	Pro	Asp	Ser
		130				135					140				
Met	Ala	Gly	Leu	Glu	Cys	Gly	His	Arg	Phe	Cys	Met	Pro	Cys	Trp	His
145					150				155						160
Glu	Tyr	Leu	Ser	Thr	Lys	Ile	Val	Ala	Glu	Gly	Leu	Gly	Gln	Thr	Ile
				165				170						175	
Ser	Cys	Ala	Ala	His	Gly	Cys	Asp	Ile	Leu	Val	Asp	Asp	Val	Thr	Val
			180				185						190		
Ala	Asn	Leu	Val	Thr	Asp	Ala	Arg	Val	Arg	Val	Lys	Tyr	Gln	Gln	Leu
		195					200					205			
Ile	Thr	Asn	Ser	Phe	Val	Glu	Cys	Asn	Gln	Leu	Leu	Arg	Trp	Cys	Pro
		210				215					220				
Ser	Val	Asp	Cys	Thr	Tyr	Ala	Val	Lys	Val	Pro	Tyr	Ala	Glu	Pro	Arg

225	Arg	Val	His	Cys	Lys	230	Cys	Gly	His	Val	235	Cys	Phe	Ala	Cys	Gly	240	Glu
					245						250					255		
Asn	Trp	His	Asp	Pro	Val	Lys	Cys	Arg	Trp	Leu	Lys	Lys	Trp	Ile	Lys			
			260					265						270				
Lys	Cys	Asp	Asp	Asp	Ser	Glu	Thr	Ser	Asn	Trp	Ile	Ala	Ala	Asn	Thr			
		275					280					285						
Lys	Glu	Cys	Pro	Arg	Cys	Ser	Val	Thr	Ile	Glu	Lys	Asp	Gly	Gly	Cys			
	290					295				300								
Asn	His	Met	Val	Cys	Lys	Asn	Gln	Asn	Cys	Lys	Asn	Glu	Phe	Cys	Trp			
305					310				315						320			
Val	Cys	Leu	Gly	Ser	Trp	Glu	Pro	His	Gly	Ser	Ser	Trp	Tyr	Asn	Cys			
				325					330					335				
Asn	Arg	Tyr	Asp	Glu	Asp	Glu	Ala	Lys	Thr	Ala	Arg	Asp	Ala	Gln	Glu			
			340					345					350					
Lys	Leu	Arg	Ser	Ser	Leu	Ala	Arg	Tyr	Leu	His	Tyr	Tyr	Asn	Arg	Tyr			
		355					360					365						
Met	Asn	His	Met	Gln	Ser	Met	Lys	Phe	Glu	Asn	Lys	Leu	Tyr	Ala	Ser			
	370					375				380								
Val	Lys	Gln	Lys	Met	Glu	Glu	Met	Gln	Gln	His	Asn	Met	Ser	Trp	Ile			
385					390					395					400			
Glu	Val	Gln	Phe	Leu	Lys	Lys	Ala	Val	Asp	Ile	Leu	Cys	Gln	Cys	Arg			
				405					410					415				
Gln	Thr	Leu	Met	Tyr	Thr	Tyr	Val	Phe	Ala	Tyr	Tyr	Leu	Lys	Lys	Asn			
			420					425					430					
Asn	Gln	Ser	Met	Ile	Phe	Glu	Asp	Asn	Gln	Lys	Asp	Leu	Glu	Ser	Ala			
		435					440					445						
Thr	Glu	Met	Leu	Ser	Glu	Tyr	Leu	Glu	Arg	Asp	Ile	Thr	Ser	Glu	Asn			
	450				455					460								
Leu	Ala	Asp	Ile	Lys	Gln	Lys	Val	Gln	Asp	Lys	Tyr	Arg	Tyr	Cys	Glu			
465					470				475					480				
Lys	Arg	Cys	Ser	Val	Leu	Leu	Lys	His	Val	His	Glu	Gly	Tyr	Asp	Lys			
				485					490					495				
Glu	Trp	Trp	Glu	Tyr	Thr	Glu												
			500															

<210> 14  
 <211> 961  
 <212> PRT  
 <213> Homo sapiens

<400> 14

Met	Leu	Leu	Leu	Leu	Leu	Leu	Ala	Pro	Leu	Phe	Leu	Arg	Pro	Pro	Gly
1				5					10					15	
Ala	Gly	Gly	Ala	Gln	Thr	Pro	Asn	Ala	Thr	Ser	Glu	Gly	Cys	Gln	Ile
			20					25					30		
Ile	His	Pro	Pro	Trp	Glu	Gly	Gly	Ile	Arg	Tyr	Arg	Gly	Leu	Thr	Arg
		35				40						45			
Asp	Gln	Val	Lys	Ala	Ile	Asn	Phe	Leu	Pro	Val	Asp	Tyr	Glu	Ile	Glu
	50					55				60					
Tyr	Val	Cys	Arg	Gly	Glu	Arg	Glu	Val	Val	Gly	Pro	Lys	Val	Arg	Lys
65					70				75					80	
Cys	Leu	Ala	Asn	Gly	Ser	Trp	Thr	Asp	Met	Asp	Thr	Pro	Ser	Arg	Cys
			85					90					95		
Val	Arg	Ile	Cys	Ser	Lys	Ser	Tyr	Leu	Thr	Leu	Glu	Asn	Gly	Lys	Val
			100				105						110		
Phe	Leu	Thr	Gly	Gly	Asp	Leu	Pro	Ala	Leu	Asp	Gly	Ala	Arg	Val	Asp
		115					120					125			
Phe	Arg	Cys	Asp	Pro	Asp	Phe	His	Leu	Val	Gly	Ser	Ser	Arg	Ser	Ile
	130					135				140					
Cys	Ser	Gln	Gly	Gln	Trp	Ser	Thr	Pro	Lys	Pro	His	Cys	Gln	Val	Asn
145					150					155					160

Arg	Thr	Pro	His	Ser	Glu	Arg	Arg	Ala	Val	Tyr	Ile	Gly	Ala	Leu	Phe
				165					170					175	
Pro	Met	Ser	Gly	Gly	Trp	Pro	Gly	Gly	Gln	Ala	Cys	Gln	Pro	Ala	Val
			180					185					190		
Glu	Met	Ala	Leu	Glu	Asp	Val	Asn	Ser	Arg	Arg	Asp	Ile	Leu	Pro	Asp
		195					200					205			
Tyr	Glu	Leu	Lys	Leu	Ile	His	His	Asp	Ser	Lys	Cys	Asp	Pro	Gly	Gln
	210					215					220				
Ala	Thr	Lys	Tyr	Leu	Tyr	Glu	Leu	Leu	Tyr	Asn	Asp	Pro	Ile	Lys	Ile
225					230					235					240
Ile	Leu	Met	Pro	Gly	Cys	Ser	Ser	Val	Ser	Thr	Leu	Val	Ala	Glu	Ala
				245					250					255	
Ala	Arg	Met	Trp	Asn	Leu	Ile	Val	Leu	Ser	Tyr	Gly	Ser	Ser	Ser	Pro
			260					265					270		
Ala	Leu	Ser	Asn	Arg	Gln	Arg	Phe	Pro	Thr	Phe	Phe	Arg	Thr	His	Pro
		275					280					285			
Ser	Ala	Thr	Leu	His	Asn	Pro	Thr	Arg	Val	Lys	Leu	Phe	Glu	Lys	Trp
	290					295					300				
Gly	Trp	Lys	Lys	Ile	Ala	Thr	Ile	Gln	Gln	Thr	Thr	Glu	Val	Phe	Thr
305					310					315					320
Ser	Thr	Leu	Asp	Asp	Leu	Glu	Glu	Arg	Val	Lys	Glu	Ala	Gly	Ile	Glu
				325					330					335	
Ile	Thr	Phe	Arg	Gln	Ser	Phe	Phe	Ser	Asp	Pro	Ala	Val	Pro	Val	Lys
			340					345					350		
Asn	Leu	Lys	Arg	Gln	Asp	Ala	Arg	Ile	Ile	Val	Gly	Leu	Phe	Tyr	Glu
		355					360					365			
Thr	Glu	Ala	Arg	Lys	Val	Phe	Cys	Glu	Val	Tyr	Lys	Glu	Arg	Leu	Phe
	370					375					380				
Gly	Lys	Lys	Tyr	Val	Trp	Phe	Leu	Ile	Gly	Trp	Tyr	Ala	Asp	Asn	Trp
385					390					395				400	
Phe	Lys	Ile	Tyr	Asp	Pro	Ser	Ile	Asn	Cys	Thr	Val	Asp	Glu	Met	Thr
				405					410					415	
Glu	Ala	Val	Glu	Gly	His	Ile	Thr	Thr	Glu	Ile	Val	Met	Leu	Asn	Pro
			420					425					430		
Ala	Asn	Thr	Arg	Ser	Ile	Ser	Asn	Met	Thr	Ser	Gln	Glu	Phe	Val	Glu
		435					440					445			
Lys	Leu	Thr	Lys	Arg	Leu	Lys	Arg	His	Pro	Glu	Glu	Thr	Gly	Gly	Phe
	450					455					460				
Gln	Glu	Ala	Pro	Leu	Ala	Tyr	Asp	Ala	Ile	Trp	Ala	Leu	Ala	Leu	Ala
465					470					475					480
Leu	Asn	Lys	Thr	Ser	Gly	Gly	Gly	Gly	Arg	Ser	Gly	Val	Arg	Leu	Glu
				485					490					495	
Asp	Phe	Asn	Tyr	Asn	Asn	Gln	Thr	Ile	Thr	Asp	Gln	Ile	Tyr	Arg	Ala
			500					505					510		
Met	Asn	Ser	Ser	Ser	Phe	Glu	Gly	Val	Ser	Gly	His	Val	Val	Phe	Asp
		515					520					525			
Ala	Ser	Gly	Ser	Arg	Met	Ala	Trp	Thr	Leu	Ile	Glu	Gln	Leu	Gln	Gly
	530					535					540				
Gly	Ser	Tyr	Lys	Lys	Ile	Gly	Tyr	Tyr	Asp	Ser	Thr	Lys	Asp	Asp	Leu
545					550					555					560
Ser	Trp	Ser	Lys	Thr	Asp	Lys	Trp	Ile	Gly	Gly	Ser	Pro	Pro	Ala	Asp
				565					570					575	
Gln	Thr	Leu	Val	Ile	Lys	Thr	Phe	Arg	Phe	Leu	Ser	Gln	Lys	Leu	Phe
			580					585					590		
Ile	Ser	Val	Ser	Val	Leu	Ser	Ser	Leu	Gly	Ile	Val	Leu	Ala	Val	Val
		595					600					605			
Cys	Leu	Ser	Phe	Asn	Ile	Tyr	Asn	Ser	His	Val	Arg	Tyr	Ile	Gln	Asn
	610					615					620				
Ser	Gln	Pro	Asn	Leu	Asn	Asn	Leu	Thr	Ala	Val	Gly	Cys	Ser	Leu	Ala
625					630					635					640
Leu	Ala	Ala	Val	Phe	Pro	Leu	Gly	Leu	Asp	Gly	Tyr	His	Ile	Gly	Arg
				645					650					655	
Asn	Gln	Phe	Pro	Phe	Val	Cys	Gln	Ala	Arg	Leu	Trp	Leu	Leu	Gly	Leu

			660					665				670					
Gly	Phe	Ser	Leu	Gly	Tyr	Gly	Ser	Met	Phe	Thr	Lys	Ile	Trp	Trp	Val		
		675					680					685					
His	Thr	Val	Phe	Thr	Lys	Lys	Glu	Glu	Lys	Lys	Glu	Trp	Arg	Lys	Thr		
		690				695					700						
Leu	Glu	Pro	Trp	Lys	Leu	Tyr	Ala	Thr	Val	Gly	Leu	Leu	Val	Gly	Met		
705					710					715					720		
Asp	Val	Leu	Thr	Leu	Ala	Ile	Trp	Gln	Ile	Val	Asp	Pro	Leu	His	Arg		
				725					730					735			
Thr	Ile	Glu	Thr	Phe	Ala	Lys	Glu	Glu	Pro	Lys	Glu	Asp	Ile	Asp	Val		
			740					745					750				
Ser	Ile	Leu	Pro	Gln	Leu	Glu	His	Cys	Ser	Ser	Arg	Lys	Met	Asn	Thr		
		755					760					765					
Trp	Leu	Gly	Ile	Phe	Tyr	Gly	Tyr	Lys	Gly	Leu	Leu	Leu	Leu	Leu	Gly		
		770				775					780						
Ile	Phe	Leu	Ala	Tyr	Glu	Thr	Lys	Ser	Val	Ser	Thr	Glu	Lys	Ile	Asn		
785					790					795					800		
Asp	His	Arg	Ala	Val	Gly	Met	Ala	Ile	Tyr	Asn	Val	Ala	Val	Leu	Cys		
				805					810					815			
Leu	Ile	Thr	Ala	Pro	Val	Thr	Met	Ile	Leu	Ser	Ser	Gln	Gln	Asp	Ala		
			820					825					830				
Ala	Phe	Ala	Phe	Ala	Ser	Leu	Ala	Ile	Val	Phe	Ser	Ser	Tyr	Ile	Thr		
		835					840					845					
Leu	Val	Val	Leu	Phe	Val	Pro	Lys	Met	Arg	Arg	Leu	Ile	Thr	Arg	Gly		
		850				855					860						
Glu	Trp	Gln	Ser	Glu	Ala	Gln	Asp	Thr	Met	Lys	Thr	Gly	Ser	Ser	Thr		
865					870					875					880		
Asn	Asn	Asn	Glu	Glu	Glu	Lys	Ser	Arg	Leu	Leu	Glu	Lys	Glu	Asn	Arg		
				885					890					895			
Glu	Leu	Glu	Lys	Ile	Ile	Ala	Glu	Lys	Glu	Glu	Arg	Val	Ser	Glu	Leu		
			900					905					910				
Arg	His	Gln	Leu	Gln	Ser	Arg	Gln	Gln	Leu	Arg	Ser	Arg	Arg	His	Pro		
		915					920					925					
Pro	Thr	Pro	Pro	Glu	Pro	Ser	Gly	Gly	Leu	Pro	Arg	Gly	Pro	Pro	Glu		
		930				935					940						
Pro	Pro	Asp	Arg	Leu	Ser	Cys	Asp	Gly	Ser	Arg	Val	His	Leu	Leu	Tyr		
945					950					955					960		
Lys																	

<210> 15  
 <211> 281  
 <212> PRT  
 <213> Saccharomyces cerevisiae

Met	Ser	Glu	Tyr	Gln	Pro	Ser	Leu	Phe	Ala	Leu	Asn	Pro	Met	Gly	Phe		
1				5				10					15				
Ser	Pro	Leu	Asp	Gly	Ser	Lys	Ser	Thr	Asn	Glu	Asn	Val	Ser	Ala	Ser		
			20					25					30				
Thr	Ser	Thr	Ala	Lys	Pro	Met	Val	Gly	Gln	Leu	Ile	Phe	Asp	Lys	Phe		
		35					40					45					
Ile	Lys	Thr	Glu	Glu	Asp	Pro	Ile	Ile	Lys	Gln	Asp	Thr	Pro	Ser	Asn		
		50				55					60						
Leu	Asp	Phe	Asp	Phe	Ala	Leu	Pro	Gln	Thr	Ala	Thr	Ala	Pro	Asp	Ala		
65					70					75					80		
Lys	Thr	Val	Leu	Pro	Ile	Pro	Glu	Leu	Asp	Ala	Val	Val	Glu	Ser			
				85					90					95			
Phe	Phe	Ser	Ser	Ser	Thr	Asp	Ser	Thr	Pro	Met	Phe	Glu	Tyr	Glu	Asn		
			100					105					110				
Leu	Glu	Asp	Asn	Ser	Lys	Glu	Trp	Thr	Ser	Leu	Phe	Asp	Asn	Asp	Ile		
		115					120					125					

Pro	Val	Thr	Thr	Asp	Asp	Val	Ser	Leu	Ala	Asp	Lys	Ala	Ile	Glu	Ser
	130					135					140				
Thr	Glu	Glu	Val	Ser	Leu	Val	Pro	Ser	Asn	Leu	Glu	Val	Ser	Thr	Thr
145					150					155					160
Ser	Phe	Leu	Pro	Thr	Pro	Val	Leu	Glu	Asp	Ala	Lys	Leu	Thr	Gln	Thr
				165					170					175	
Arg	Lys	Val	Lys	Lys	Pro	Asn	Ser	Val	Val	Lys	Lys	Ser	His	His	Val
			180					185					190		
Gly	Lys	Asp	Asp	Glu	Ser	Arg	Leu	Asp	His	Leu	Gly	Val	Val	Ala	Tyr
		195					200					205			
Asn	Arg	Lys	Gln	Arg	Ser	Ile	Pro	Leu	Ser	Pro	Ile	Val	Pro	Glu	Ser
		210				215					220				
Ser	Asp	Pro	Ala	Ala	Leu	Lys	Arg	Ala	Arg	Asn	Thr	Glu	Ala	Ala	Arg
225					230					235					240
Arg	Ser	Arg	Ala	Arg	Lys	Leu	Gln	Arg	Met	Lys	Gln	Leu	Glu	Asp	Lys
				245					250					255	
Val	Glu	Glu	Leu	Leu	Ser	Lys	Asn	Tyr	His	Leu	Glu	Asn	Glu	Val	Ala
			260					265					270		
Arg	Leu	Lys	Lys	Leu	Val	Gly	Glu	Arg							
		275					280								

<210> 16  
 <211> 957  
 <212> PRT  
 <213> Homo sapiens

<400> 16															
Met	Ala	Asp	Pro	Ala	Glu	Cys	Ser	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg
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Pro	Leu	Asn	Glu	Ala	Glu	Ile	Leu	Arg	Gly	Asp	Lys	Phe	Ile	Pro	Lys
			20					25					30		
Phe	Lys	Gly	Asp	Glu	Thr	Val	Val	Ile	Gly	Gln	Gly	Lys	Pro	Tyr	Val
		35					40					45			
Phe	Asp	Arg	Val	Leu	Pro	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val	Tyr	Asn
	50					55				60					
Ala	Cys	Ala	Lys	Gln	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly
65				70					75					80	
Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met
				85				90						95	
Glu	Gly	Lys	Leu	His	Asp	Pro	Gln	Leu	Met	Gly	Ile	Ile	Pro	Arg	Ile
			100				105						110		
Ala	His	Asp	Ile	Phe	Asp	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu
		115				120					125				
Phe	His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg
	130					135					140				
Asp	Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ala	Val	His	Glu	Asp	Lys
145					150					155					160
Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Ser	Ser
			165					170						175	
Pro	Glu	Glu	Val	Met	Asp	Val	Ile	Asp	Glu	Gly	Lys	Ala	Asn	Arg	His
			180				185						190		
Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile
		195				200						205			
Phe	Leu	Ile	Asn	Ile	Lys	Gln	Glu	Asn	Val	Glu	Thr	Glu	Lys	Lys	Leu
	210					215					220				
Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser
225					230					235					240
Lys	Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn
			245					250						255	
Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly
			260				265						270		
Thr	Lys	Thr	His	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu





Lys	Gly	Leu	Glu	Glu	Thr	Val	Ser	Arg	Glu	Leu	Gln	Thr	Leu	His	Asn
785					790					795					800
Leu	Arg	Lys	Leu	Phe	Val	Gln	Asp	Leu	Thr	Thr	Arg	Val	Lys	Lys	Ser
				805					810					815	
Val	Glu	Leu	Asp	Asn	Asp	Asp	Gly	Gly	Gly	Ser	Ala	Ala	Gln	Lys	Gln
			820					825					830		
Lys	Ile	Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His
		835					840					845			
Lys	Gln	Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys
	850					855					860				
Leu	Glu	Lys	Arg	Leu	Arg	Ala	Thr	Ala	Glu	Arg	Val	Lys	Ala	Leu	Glu
865					870					875					880
Ser	Ala	Leu	Lys	Glu	Ala	Lys	Glu	Asn	Ala	Met	Arg	Asp	Arg	Lys	Arg
				885					890					895	
Tyr	Gln	Gln	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Ala	Lys	Asn
			900					905					910		
Met	Ala	Arg	Arg	Ala	His	Ser	Ala	Gln	Ile	Ala	Lys	Pro	Ile	Arg	Pro
		915					920					925			
Gly	His	Tyr	Pro	Ala	Ser	Ser	Pro	Thr	Ala	Val	His	Ala	Ile	Arg	Gly
	930					935					940				
Gly	Gly	Gly	Ser	Ser	Ser	Asn	Ser	Thr	His	Tyr	Gln	Lys			
945					950					955					

<210> 17  
 <211> 956  
 <212> PRT  
 <213> Mus musculus

<400> 17

Met	Ala	Asp	Pro	Ala	Glu	Cys	Ser	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg
1				5					10					15	
Pro	Leu	Asn	Glu	Ala	Glu	Ile	Leu	Arg	Gly	Asp	Lys	Phe	Ile	Pro	Lys
			20					25					30		
Phe	Lys	Gly	Glu	Glu	Thr	Val	Val	Ile	Gly	Gln	Gly	Lys	Pro	Tyr	Val
		35					40					45			
Phe	Asp	Arg	Val	Leu	Pro	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val	Tyr	Asn
	50					55				60					
Ala	Cys	Ala	Lys	Gln	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly
65					70					75					80
Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met
				85				90						95	
Glu	Gly	Lys	Leu	His	Asp	Pro	Gln	Leu	Met	Gly	Ile	Ile	Pro	Arg	Ile
			100					105					110		
Ala	His	Asp	Ile	Phe	Asp	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu
		115					120					125			
Phe	His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg
	130					135					140				
Asp	Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ala	Val	His	Glu	Asp	Lys
145					150					155					160
Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Ser	Ser
				165					170					175	
Pro	Glu	Glu	Val	Met	Asp	Val	Ile	Asp	Glu	Gly	Lys	Ala	Asn	Arg	His
			180					185					190		
Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile
		195					200					205			
Phe	Leu	Ile	Asn	Ile	Lys	Gln	Glu	Asn	Val	Glu	Thr	Glu	Lys	Lys	Leu
	210					215						220			
Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser
225					230					235					240
Lys	Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn
				245					250					255	
Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly



Leu	Leu	Leu	Leu	Asn	Asp	Lys	Arg	Glu	Gln	Ala	Arg	Glu	Asp	Leu	Lys
	770					775					780				
Gly	Leu	Glu	Glu	Thr	Val	Ser	Ile	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu
785					790					795					800
Arg	Lys	Leu	Phe	Val	Gln	Asp	Leu	Thr	Thr	Arg	Val	Lys	Lys	Ser	Val
				805					810					815	
Glu	Leu	Asp	Ser	Asp	Asp	Gly	Gly	Gly	Ser	Ala	Ala	Gln	Lys	Gln	Lys
			820					825					830		
Ile	Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys
		835					840					845			
Gln	Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys	Leu
	850					855					860				
Glu	Lys	Arg	Leu	Arg	Ala	Thr	Ala	Glu	Arg	Val	Lys	Ala	Leu	Glu	Ser
865					870					875					880
Ala	Leu	Lys	Glu	Ala	Lys	Glu	Asn	Ala	Met	Arg	Asp	Arg	Lys	Arg	Tyr
				885					890					895	
Gln	Gln	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Ala	Lys	Asn	Met
			900					905					910		
Ala	Arg	Arg	Ala	His	Ser	Ala	Gln	Ile	Ala	Lys	Pro	Ile	Arg	Pro	Gly
		915					920					925			
His	Tyr	Pro	Ala	Ser	Ser	Pro	Thr	Ala	Val	His	Ala	Val	Arg	Gly	Gly
	930					935					940				
Gly	Gly	Gly	Ser	Ser	Asn	Ser	Thr	His	Tyr	Gln	Lys				
945					950					955					

<210> 18  
 <211> 815  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 18

Met	Glu	Pro	Arg	Thr	Asp	Gly	Ala	Glu	Cys	Gly	Val	Gln	Val	Phe	Cys
1				5					10					15	
Arg	Ile	Arg	Pro	Leu	Asn	Lys	Thr	Glu	Glu	Lys	Asn	Ala	Asp	Arg	Phe
			20					25					30		
Leu	Pro	Lys	Phe	Pro	Ser	Glu	Asp	Ser	Ile	Ser	Leu	Gly	Gly	Lys	Val
		35					40					45			
Tyr	Val	Phe	Asp	Lys	Val	Phe	Lys	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val
	50					55					60				
Tyr	Lys	Gly	Ala	Ala	Tyr	His	Ile	Val	Gln	Asp	Val	Leu	Ser	Gly	Tyr
65					70					75					80
Asn	Gly	Thr	Val	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His
				85					90					95	
Thr	Met	Glu	Gly	Val	Ile	Gly	Asp	Asn	Gly	Leu	Ser	Gly	Ile	Ile	Pro
			100					105					110		
Arg	Ile	Val	Ala	Asp	Ile	Phe	Asn	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn
		115					120					125			
Leu	Gln	Phe	His	Ile	Lys	Val	Ser	Tyr	Tyr	Glu	Ile	Tyr	Asn	Glu	Lys
	130					135						140			
Ile	Arg	Asp	Leu	Leu	Asp	Pro	Glu	Lys	Val	Asn	Leu	Ser	Ile	His	Glu
145					150					155					160
Asp	Lys	Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Ala	Thr	Glu	Arg	Phe	Val
				165					170					175	
Gly	Gly	Pro	Asp	Glu	Val	Leu	Gln	Ala	Ile	Glu	Asp	Gly	Lys	Ser	Asn
			180					185					190		
Arg	Met	Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His
		195					200					205			
Ser	Val	Phe	Leu	Ile	Thr	Val	Lys	Gln	Glu	His	Gln	Thr	Thr	Lys	Lys
	210					215					220				
Gln	Leu	Thr	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys
225					230					235					240
Val	Ser	Lys	Thr	Gly	Ala	Gln	Gly	Thr	Val	Leu	Glu	Glu	Ala	Lys	Asn



Ser	Lys	Gln	Arg	Ser	Gln	Ala	Glu	Arg	Lys	Lys	Tyr	Gln	Gln	Glu	Val
		755					760					765			
Glu	Arg	Ile	Lys	Glu	Ala	Val	Arg	Gln	Arg	Asn	Met	Arg	Arg	Met	Asn
	770					775					780				
Ala	Pro	Gln	Ile	Val	Lys	Pro	Ile	Arg	Pro	Gly	Gln	Val	Tyr	Thr	Ser
785					790					795					800
Pro	Ser	Ala	Gly	Met	Ser	Gln	Gly	Ala	Pro	Asn	Gly	Ser	Asn	Ala	
				805					810					815	

<210> 19  
 <211> 975  
 <212> PRT  
 <213> *Drosophila melanogaster*

<400> 19

Met	Ser	Ala	Glu	Arg	Glu	Ile	Pro	Ala	Glu	Asp	Ser	Ile	Lys	Val	Val
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Cys	Arg	Phe	Arg	Pro	Leu	Asn	Asp	Ser	Glu	Glu	Lys	Ala	Gly	Ser	Lys
		20					25						30		
Phe	Val	Val	Lys	Phe	Pro	Asn	Asn	Val	Glu	Glu	Asn	Cys	Ile	Ser	Ile
	35					40						45			
Ala	Gly	Lys	Val	Tyr	Leu	Phe	Asp	Lys	Val	Phe	Lys	Pro	Asn	Ala	Ser
50					55						60				
Gln	Glu	Lys	Val	Tyr	Asn	Glu	Ala	Ala	Lys	Ser	Ile	Val	Thr	Asp	Val
65					70					75					80
Leu	Ala	Gly	Tyr	Asn	Gly	Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser
				85					90					95	
Gly	Lys	Thr	His	Thr	Met	Glu	Gly	Val	Ile	Gly	Asp	Ser	Val	Lys	Gln
			100					105					110		
Gly	Ile	Ile	Pro	Arg	Ile	Val	Asn	Asp	Ile	Phe	Asn	His	Ile	Tyr	Ala
	115						120					125			
Met	Glu	Val	Asn	Leu	Glu	Phe	His	Ile	Lys	Val	Ser	Tyr	Tyr	Glu	Ile
130						135					140				
Tyr	Met	Asp	Lys	Ile	Arg	Asp	Leu	Leu	Asp	Val	Ser	Lys	Val	Asn	Leu
145					150					155					160
Ser	Val	His	Glu	Asp	Lys	Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Ala	Thr
				165					170					175	
Glu	Arg	Phe	Val	Ser	Ser	Pro	Glu	Asp	Val	Phe	Glu	Val	Ile	Glu	Glu
			180					185					190		
Gly	Lys	Ser	Asn	Arg	His	Ile	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser
		195					200					205			
Ser	Arg	Ser	His	Ser	Val	Phe	Leu	Ile	Asn	Val	Lys	Gln	Glu	Asn	Leu
210						215					220				
Glu	Asn	Gln	Lys	Lys	Leu	Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala
225					230					235					240
Gly	Ser	Glu	Lys	Val	Ser	Lys	Thr	Gly	Ala	Glu	Gly	Thr	Val	Leu	Asp
				245					250					255	
Glu	Ala	Lys	Asn	Ile	Asn	Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile
			260					265					270		
Ser	Ala	Leu	Ala	Asp	Gly	Asn	Lys	Thr	His	Ile	Pro	Tyr	Arg	Asp	Ser
	275						280					285			
Lys	Leu	Thr	Arg	Ile	Leu	Gln	Glu	Ser	Leu	Gly	Gly	Asn	Ala	Arg	Thr
290						295					300				
Thr	Ile	Val	Ile	Cys	Cys	Ser	Pro	Ala	Ser	Phe	Asn	Glu	Ser	Glu	Thr
305					310					315					320
Lys	Ser	Thr	Leu	Asp	Phe	Gly	Arg	Arg	Ala	Lys	Thr	Val	Lys	Asn	Val
				325					330					335	
Val	Cys	Val	Asn	Glu	Glu	Leu	Thr	Ala	Glu	Glu	Trp	Lys	Arg	Arg	Tyr
			340					345					350		
Glu	Lys	Glu	Lys	Glu	Lys	Asn	Ala	Arg	Leu	Lys	Gly	Lys	Val	Glu	Lys
		355				360						365			
Leu	Glu	Ile	Glu	Leu	Ala	Arg	Trp	Arg	Ala	Gly	Glu	Thr	Val	Lys	Ala

370		375		380											
Glu	Glu	Gln	Ile	Asn	Met	Glu	Asp	Leu	Met	Glu	Ala	Ser	Thr	Pro	Asn
385					390					395					400
Leu	Glu	Val	Glu	Ala	Ala	Gln	Thr	Ala	Ala	Ala	Glu	Ala	Ala	Leu	Ala
				405					410						415
Ala	Gln	Arg	Thr	Ala	Leu	Ala	Asn	Met	Ser	Ala	Ser	Val	Ala	Val	Asn
			420					425					430		
Glu	Gln	Ala	Arg	Leu	Ala	Thr	Glu	Cys	Glu	Arg	Leu	Tyr	Gln	Gln	Leu
		435					440					445			
Asp	Asp	Lys	Asp	Glu	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Tyr	Ala	Glu	Gln
	450					455					460				
Leu	Lys	Glu	Gln	Val	Met	Glu	Gln	Glu	Glu	Leu	Ile	Ala	Asn	Ala	Arg
465					470					475					480
Arg	Glu	Tyr	Glu	Thr	Leu	Gln	Ser	Glu	Met	Ala	Arg	Ile	Gln	Gln	Glu
				485					490						495
Asn	Glu	Ser	Ala	Lys	Glu	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu
			500					505					510		
Glu	Leu	Ala	Val	Asn	Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Ile	Asp	Asn	Lys
		515				520						525			
Asn	Lys	Asp	Ile	Asp	Ala	Leu	Asn	Glu	Glu	Leu	Gln	Lys	Gln	Ser	
	530					535					540				
Val	Phe	Asn	Ala	Ala	Ser	Thr	Glu	Leu	Gln	Gln	Leu	Lys	Asp	Met	Ser
545					550					555					560
Ser	His	Gln	Lys	Lys	Arg	Ile	Thr	Glu	Met	Leu	Thr	Asn	Leu	Leu	Arg
				565					570						575
Asp	Leu	Gly	Glu	Val	Gly	Gln	Ala	Ile	Ala	Pro	Gly	Glu	Ser	Ser	Ile
		580					585						590		
Asp	Leu	Lys	Met	Ser	Ala	Leu	Ala	Gly	Thr	Asp	Ala	Ser	Lys	Val	Glu
		595				600					605				
Glu	Asp	Phe	Thr	Met	Ala	Arg	Leu	Phe	Ile	Ser	Lys	Met	Lys	Thr	Glu
	610				615						620				
Ala	Lys	Asn	Ile	Ala	Gln	Arg	Cys	Ser	Asn	Met	Glu	Thr	Gln	Gln	Ala
625					630					635					640
Asp	Ser	Asn	Lys	Lys	Ile	Ser	Glu	Tyr	Glu	Lys	Asp	Leu	Gly	Glu	Tyr
			645						650					655	
Arg	Leu	Leu	Ile	Ser	Gln	His	Glu	Ala	Arg	Met	Lys	Ser	Leu	Gln	Glu
			660				665						670		
Ser	Met	Arg	Glu	Ala	Glu	Asn	Lys	Lys	Arg	Thr	Leu	Glu	Glu	Gln	Ile
		675				680						685			
Asp	Ser	Leu	Arg	Glu	Glu	Cys	Ala	Lys	Leu	Lys	Ala	Ala	Glu	His	Val
	690					695					700				
Ser	Ala	Val	Asn	Ala	Glu	Glu	Lys	Gln	Arg	Ala	Glu	Glu	Leu	Arg	Ser
705					710					715					720
Met	Phe	Asp	Ser	Gln	Met	Asp	Glu	Leu	Arg	Glu	Ala	His	Thr	Arg	Gln
			725						730					735	
Val	Ser	Glu	Leu	Arg	Asp	Glu	Ile	Ala	Ala	Lys	Gln	His	Glu	Met	Asp
		740					745						750		
Glu	Met	Lys	Asp	Val	His	Gln	Lys	Leu	Leu	Leu	Ala	His	Gln	Gln	Met
		755				760						765			
Thr	Ala	Asp	Tyr	Glu	Lys	Val	Arg	Gln	Glu	Asp	Ala	Glu	Lys	Ser	Ser
	770					775					780				
Glu	Leu	Gln	Asn	Ile	Ile	Leu	Thr	Asn	Glu	Arg	Arg	Glu	Gln	Ala	Arg
785					790					795					800
Lys	Asp	Leu	Lys	Gly	Leu	Glu	Asp	Thr	Val	Ala	Lys	Glu	Leu	Gln	Thr
			805						810					815	
Leu	His	Asn	Leu	Arg	Lys	Leu	Phe	Val	Gln	Asp	Leu	Gln	Gln	Arg	Ile
		820					825						830		
Arg	Lys	Asn	Val	Val	Asn	Glu	Glu	Ser	Glu	Glu	Asp	Gly	Gly	Ser	Leu
		835					840					845			
Ala	Gln	Lys	Gln	Lys	Ile	Ser	Phe	Leu	Glu	Asn	Asn	Leu	Asp	Gln	Leu
	850					855					860				
Thr	Lys	Val	His	Lys	Gln	Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys
865					870					875					880

Glu	Leu	Pro	Lys	Leu	Glu	Lys	Arg	Leu	Arg	Cys	Thr	Met	Glu	Arg	Val
				885					890					895	
Lys	Ala	Leu	Glu	Thr	Ala	Leu	Lys	Glu	Ala	Lys	Glu	Gly	Ala	Met	Arg
			900					905					910		
Asp	Arg	Lys	Arg	Tyr	Gln	Tyr	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val
		915					920					925			
Arg	Gln	Lys	His	Leu	Gly	Arg	Arg	Gly	Pro	Gln	Ala	Gln	Ile	Ala	Lys
	930					935					940				
Pro	Ile	Arg	Ser	Gly	Gln	Gly	Ala	Ile	Ala	Ile	Arg	Gly	Gly	Gly	Ala
945					950					955					960
Val	Gly	Gly	Pro	Ser	Pro	Leu	Ala	Gln	Val	Asn	Pro	Val	Asn	Ser	
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 <212> PRT  
 <213> Homo sapiens

<400> 20

Met	Ala	Asp	Leu	Ala	Glu	Cys	Asn	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg
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Pro	Leu	Asn	Glu	Ser	Glu	Val	Asn	Arg	Gly	Asp	Lys	Tyr	Ile	Ala	Lys
		20					25						30		
Phe	Gln	Gly	Glu	Asp	Thr	Val	Val	Ile	Ala	Ser	Lys	Pro	Tyr	Ala	Phe
	35					40						45			
Asp	Arg	Val	Phe	Gln	Ser	Ser	Thr	Ser	Gln	Glu	Gln	Val	Tyr	Asn	Asp
	50					55					60				
Cys	Ala	Lys	Lys	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly	Thr
65				70					75						80
Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met	Glu
			85						90					95	
Gly	Lys	Leu	His	Asp	Pro	Glu	Gly	Met	Gly	Ile	Ile	Pro	Arg	Ile	Val
		100						105					110		
Gln	Asp	Ile	Phe	Asn	Tyr	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu	Phe
	115					120						125			
His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg	Asp
	130					135					140				
Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys	Asn
145					150					155					160
Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Cys	Ser	Pro
			165						170					175	
Asp	Glu	Val	Met	Asp	Thr	Ile	Asp	Glu	Gly	Lys	Ser	Asn	Arg	His	Val
		180						185					190		
Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile	Phe
	195						200					205			
Leu	Ile	Asn	Val	Lys	Gln	Glu	Asn	Thr	Gln	Thr	Glu	Gln	Lys	Leu	Ser
	210					215					220				
Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser	Lys
225					230					235					240
Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn	Lys
			245						250					255	
Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly	Ser
		260						265					270		
Thr	Tyr	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu	Gln	Asp
	275					280						285			
Ser	Leu	Gly	Gly	Asn	Cys	Arg	Thr	Thr	Ile	Val	Ile	Cys	Cys	Ser	Pro
	290					295					300				
Ser	Ser	Tyr	Asn	Glu	Ser	Glu	Thr	Lys	Ser	Thr	Leu	Leu	Phe	Gly	Gln
305					310					315					320
Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Val	Cys	Val	Asn	Val	Glu	Leu	Thr
			325						330					335	
Ala	Glu	Gln	Trp	Lys	Lys	Lys	Tyr	Glu	Lys	Glu	Lys	Glu	Lys	Asn	Lys

			340					345				350				
Ile	Leu	Arg	Asn	Thr	Ile	Gln	Trp	Leu	Glu	Asn	Glu	Leu	Asn	Arg	Trp	
		355					360					365				
Arg	Asn	Gly	Glu	Thr	Val	Pro	Ile	Asp	Glu	Gln	Phe	Asp	Lys	Glu	Lys	
	370					375					380					
Ala	Asn	Leu	Glu	Ala	Phe	Thr	Val	Asp	Lys	Asp	Ile	Thr	Leu	Thr	Asn	
385					390					395					400	
Asp	Lys	Pro	Ala	Thr	Ala	Ile	Gly	Val	Ile	Gly	Asn	Phe	Thr	Asp	Ala	
				405					410					415		
Glu	Arg	Arg	Lys	Cys	Glu	Glu	Glu	Ile	Ala	Lys	Leu	Tyr	Lys	Gln	Leu	
			420				425						430			
Asp	Asp	Lys	Asp	Glu	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Leu	Val	Glu	Lys	
		435					440					445				
Leu	Lys	Thr	Gln	Met	Leu	Asp	Gln	Glu	Glu	Leu	Leu	Ala	Ser	Thr	Arg	
	450					455					460					
Arg	Asp	Gln	Asp	Asn	Met	Gln	Ala	Glu	Leu	Asn	Arg	Leu	Gln	Ala	Glu	
465					470					475					480	
Asn	Asp	Ala	Ser	Lys	Glu	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu	
				485					490					495		
Glu	Leu	Ala	Val	Asn	Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Asp	Lys	
			500				505						510			
Thr	Lys	Glu	Tyr	Glu	Leu	Leu	Ser	Asp	Glu	Leu	Asn	Gln	Lys	Ser	Ala	
		515					520					525				
Thr	Leu	Ala	Ser	Ile	Asp	Ala	Glu	Leu	Gln	Lys	Leu	Lys	Glu	Met	Thr	
	530				535						540					
Asn	His	Gln	Lys	Lys	Arg	Ala	Ala	Glu	Met	Met	Ala	Ser	Leu	Leu	Lys	
545					550					555					560	
Asp	Leu	Ala	Glu	Ile	Gly	Ile	Ala	Val	Gly	Asn	Asn	Asp	Val	Lys	Gln	
				565					570					575		
Pro	Glu	Gly	Thr	Gly	Met	Ile	Asp	Glu	Glu	Phe	Thr	Val	Ala	Arg	Leu	
			580					585					590			
Tyr	Ile	Ser	Lys	Met	Lys	Ser	Glu	Val	Lys	Thr	Met	Val	Lys	Arg	Cys	
		595					600					605				
Lys	Gln	Leu	Glu	Ser	Thr	Gln	Thr	Glu	Ser	Asn	Lys	Lys	Met	Glu	Glu	
	610					615					620					
Asn	Glu	Lys	Glu	Leu	Ala	Ala	Cys	Gln	Leu	Arg	Ile	Ser	Gln	His	Glu	
625					630					635					640	
Ala	Lys	Ile	Lys	Ser	Leu	Thr	Glu	Tyr	Leu	Gln	Asn	Val	Glu	Gln	Lys	
				645					650					655		
Lys	Arg	Gln	Leu	Glu	Glu	Ser	Val	Asp	Ala	Leu	Ser	Glu	Glu	Leu	Val	
			660					665					670			
Gln	Leu	Arg	Ala	Gln	Glu	Lys	Val	His	Glu	Met	Glu	Lys	Glu	His	Leu	
			675				680						685			
Asn	Lys	Val	Gln	Thr	Ala	Asn	Glu	Val	Lys	Gln	Ala	Val	Glu	Gln	Gln	
	690				695						700					
Ile	Gln	Ser	His	Arg	Glu	Thr	His	Gln	Lys	Gln	Ile	Ser	Ser	Leu	Arg	
705					710					715					720	
Asp	Glu	Val	Glu	Ala	Lys	Ala	Lys	Leu	Ile	Thr	Asp	Leu	Gln	Asp	Gln	
				725					730					735		
Asn	Gln	Lys	Met	Met	Leu	Glu	Gln	Glu	Arg	Leu	Arg	Val	Glu	His	Glu	
			740					745					750			
Lys	Leu	Lys	Ala	Thr	Asp	Gln	Glu	Lys	Ser	Arg	Lys	Leu	His	Glu	Leu	
		755					760					765				
Thr	Val	Met	Gln	Asp	Arg	Arg	Glu	Gln	Ala	Arg	Gln	Asp	Leu	Lys	Gly	
					775							780				
Leu	Glu	Glu	Thr	Val	Ala	Lys	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu	Arg	
785					790					795					800	
Lys	Leu	Phe	Val	Gln	Asp	Leu	Ala	Thr	Arg	Val	Lys	Lys	Ser	Ala	Glu	
				805					810					815		
Ile	Asp	Ser	Asp	Asp	Thr	Gly	Gly	Ser	Ala	Ala	Gln	Lys	Gln	Lys	Ile	
			820					825					830			
Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys	Gln	
		835					840					845				



Leu Val Arg Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys Leu Glu  
 850 855 860  
 Lys Arg Leu Arg Ala Thr Ala Glu Arg Val Lys Ala Leu Glu Ser Ala  
 865 870 875 880  
 Leu Lys Glu Ala Lys Glu Asn Ala Ser Arg Asp Arg Lys Arg Tyr Gln  
 885 890 895  
 Gln Glu Val Asp Arg Ile Lys Glu Ala Val Arg Ser Lys Asn Met Ala  
 900 905 910  
 Arg Arg Gly His Ser Ala Gln Ile Ala Lys Pro Ile Arg Pro Gly Gln  
 915 920 925  
 His Pro Ala Ala Ser Pro Thr His Pro Ser Ala Ile Arg Gly Gly Gly  
 930 935 940  
 Ala Phe Val Gln Asn Ser Gln Pro Val Ala Val Arg Gly Gly Gly Gly  
 945 950 955 960  
 Lys Gln Val

<210> 21  
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 <212> PRT  
 <213> Loligo pealeii

<400> 21  
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 Pro Leu Asn Glu Ala Glu Glu Arg Ala Gly Ser Lys Phe Ile Leu Lys  
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 Phe Pro Thr Asp Asp Ser Ile Ser Ile Ala Gly Lys Val Phe Val Phe  
 35 40 45  
 Asp Lys Val Leu Lys Pro Asn Val Ser Gln Glu Tyr Val Tyr Asn Val  
 50 55 60  
 Gly Ala Lys Pro Ile Val Ala Asp Val Leu Ser Gly Cys Asn Gly Thr  
 65 70 75 80  
 Ile Phe Ala Tyr Gly Gln Thr Ser Ser Gly Lys Thr His Thr Met Glu  
 85 90 95  
 Gly Val Leu Asp Lys Pro Ser Met His Gly Ile Ile Pro Arg Ile Val  
 100 105 110  
 Gln Asp Ile Phe Asn Tyr Ile Tyr Gly Met Asp Glu Asn Leu Glu Phe  
 115 120 125  
 His Ile Lys Ile Ser Tyr Tyr Glu Ile Tyr Leu Asp Lys Ile Arg Asp  
 130 135 140  
 Leu Leu Asp Val Thr Lys Thr Asn Leu Ala Val His Glu Asp Lys Asn  
 145 150 155 160  
 Arg Val Pro Phe Val Lys Gly Ala Thr Glu Arg Phe Val Ser Ser Pro  
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 Glu Glu Val Met Glu Val Ile Asp Glu Gly Lys Asn Asn Arg His Val  
 180 185 190  
 Ala Val Thr Asn Met Asn Glu His Ser Ser Arg Ser His Ser Val Phe  
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 210 215 220  
 Gly Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser Glu Lys Val Ser Lys  
 225 230 235 240  
 Thr Gly Ala Glu Gly Ala Val Leu Asp Glu Ala Lys Asn Ile Asn Lys  
 245 250 255  
 Ser Leu Ser Ala Leu Gly Asn Val Ile Ser Ala Leu Ala Asp Gly Asn  
 260 265 270  
 Lys Ser His Val Pro Tyr Arg Asp Ser Lys Leu Thr Arg Ile Leu Gln  
 275 280 285  
 Glu Ser Leu Gly Gly Asn Ala Arg Thr Thr Met Val Ile Cys Cys Ser  
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 Pro Ala Ser Tyr Asn Glu Ser Glu Thr Lys Ser Thr Leu Leu Phe Gly

305					310					315				320
Gln	Arg	Ala	Lys	Thr	Ile	Lys	Asn	Val	Val	Ser	Val	Asn	Glu	Glu
				325					330					335
Thr	Ala	Asp	Glu	Trp	Lys	Arg	Arg	Tyr	Glu	Lys	Glu	Lys	Glu	Arg
			340					345					350	
Thr	Lys	Leu	Lys	Ala	Thr	Met	Ala	Lys	Leu	Glu	Ala	Glu	Leu	Gln
		355					360					365		Arg
Trp	Arg	Thr	Gly	Gln	Ala	Val	Ser	Val	Glu	Glu	Gln	Val	Asp	Leu
	370					375					380			Lys
Glu	Asp	Val	Pro	Ala	Glu	Ser	Pro	Ala	Thr	Ser	Thr	Thr	Ser	Leu
385					390					395				400
Gly	Gly	Leu	Ile	Ala	Ser	Met	Asn	Glu	Gly	Asp	Arg	Thr	Gln	Leu
			405					410					415	Glu
Glu	Glu	Arg	Leu	Lys	Leu	Tyr	Gln	Gln	Leu	Asp	Asp	Lys	Asp	Asp
		420					425					430		
Ile	Asn	Asn	Gln	Ser	Gln	Leu	Ile	Glu	Lys	Leu	Lys	Glu	Gln	Met
	435					440					445			Met
Glu	Gln	Glu	Asp	Leu	Ile	Ala	Gln	Ser	Arg	Arg	Asp	Tyr	Glu	Asn
	450				455					460				Leu
Gln	Gln	Asp	Met	Ser	Arg	Ile	Gln	Ala	Asp	Asn	Glu	Ser	Ala	Lys
465					470					475				Asp
Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu	Glu	Leu	Ala	Met	Asn
			485					490					495	Tyr
Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Asp	Lys	Asn	Lys	Glu	Asn	Glu
		500					505					510		Asn
Leu	Ser	Glu	Glu	Leu	Asn	Gln	Lys	Leu	Ser	Thr	Leu	Asn	Ser	Leu
	515					520					525			Gln
Asn	Glu	Leu	Asp	Gln	Leu	Lys	Asp	Ser	Ser	Met	His	His	Arg	Lys
	530				535					540				Arg
Val	Thr	Asp	Met	Met	Ile	Asn	Leu	Leu	Lys	Asp	Leu	Gly	Asp	Ile
545				550					555					Gly
Thr	Ile	Val	Gly	Gly	Asn	Ala	Ala	Glu	Thr	Lys	Pro	Thr	Ala	Gly
			565					570						575
Gly	Glu	Lys	Ile	Glu	Glu	Glu	Phe	Thr	Val	Ala	Arg	Leu	Tyr	Ile
		580					585					590		Ser
Lys	Met	Lys	Ser	Glu	Val	Lys	Thr	Leu	Val	Ser	Arg	Asn	Asn	Gln
	595					600						605		Leu
Glu	Asn	Thr	Gln	Gln	Asp	Asn	Phe	Lys	Lys	Ile	Glu	Thr	His	Glu
	610				615					620				Lys
Asp	Leu	Ser	Asn	Cys	Lys	Leu	Leu	Ile	Gln	Gln	His	Glu	Ala	Lys
625				630					635					Met
Ala	Ser	Leu	Gln	Glu	Ala	Ile	Lys	Asp	Ser	Glu	Asn	Lys	Lys	Arg
			645					650					655	Met
Leu	Glu	Asp	Asn	Val	Asp	Ser	Leu	Asn	Glu	Glu	Tyr	Ala	Lys	Leu
	660					665						670		Lys
Ala	Gln	Glu	Gln	Met	His	Leu	Ala	Ala	Leu	Ser	Glu	Arg	Glu	Lys
	675					680						685		Glu
Thr	Ser	Gln	Ala	Ser	Glu	Thr	Arg	Glu	Val	Leu	Glu	Lys	Gln	Met
	690				695				700					Glu
Met	His	Arg	Glu	Gln	His	Gln	Lys	Gln	Leu	Gln	Ser	Leu	Arg	Asp
705				710					715					Glu
Ile	Ser	Glu	Lys	Gln	Ala	Thr	Val	Asp	Asn	Leu	Lys	Asp	Asp	Asn
			725					730					735	Gln
Arg	Leu	Ser	Leu	Ala	Leu	Glu	Lys	Leu	Gln	Ala	Asp	Tyr	Asp	Lys
	740						745					750		Leu
Lys	Gln	Glu	Glu	Val	Glu	Lys	Ala	Ala	Lys	Leu	Ala	Asp	Leu	Ser
	755					760					765			Leu
Gln	Ile	Asp	Arg	Arg	Glu	Gln	Ala	Lys	Gln	Asp	Leu	Lys	Gly	Leu
	770				775				780					Glu
Glu	Thr	Val	Ala	Lys	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu	Arg	Lys
785				790					795					Leu
Phe	Val	Gln	Asp	Leu	Gln	Asn	Lys	Val	Lys	Lys	Ser	Cys	Ser	Lys
			805					810						Thr

Glu	Glu	Glu	Asp	Glu	Asp	Thr	Gly	Gly	Asn	Ala	Ala	Gln	Lys	Gln	Lys
			820					825					830		
Ile	Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys
		835					840					845			
Gln	Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys	Leu
	850				855					860					
Glu	Lys	Arg	Leu	Arg	Ala	Thr	Met	Glu	Arg	Val	Lys	Ser	Leu	Glu	Ser
865					870				875						880
Ala	Leu	Lys	Asp	Ala	Lys	Glu	Gly	Ala	Met	Arg	Asp	Arg	Lys	Arg	Tyr
			885					890						895	
Gln	His	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Gln	Lys	Asn	Leu
			900					905					910		
Ala	Arg	Arg	Gly	His	Ala	Ala	Gln	Ile	Ala	Lys	Pro	Ile	Arg	Pro	Gly
		915					920					925			
Gln	His	Gln	Ser	Val	Ser	Pro	Ala	Gln	Ala	Ala	Ala	Ile	Arg	Gly	Gly
	930					935				940					
Gly	Gly	Leu	Ser	Gln	Asn	Gly	Pro	Met	Ile	Thr	Ser	Thr	Pro	Ile	Arg
945					950				955						960
Met	Ala	Pro	Glu	Ser	Lys	Ala									
				965											

<210> 22  
 <211> 963  
 <212> PRT  
 <213> Mus musculus

<400> 22

Met	Ala	Asp	Pro	Ala	Glu	Cys	Asn	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg
1				5					10					15	
Pro	Leu	Asn	Glu	Ser	Glu	Val	Asn	Arg	Gly	Asp	Lys	Tyr	Val	Ala	Lys
		20					25						30		
Phe	Gln	Gly	Glu	Asp	Thr	Val	Val	Ile	Ala	Ser	Lys	Pro	Tyr	Ala	Phe
	35					40						45			
Asp	Arg	Val	Phe	Gln	Ser	Ser	Thr	Ser	Gln	Glu	Gln	Val	Tyr	Asn	Asp
	50				55						60				
Cys	Ala	Lys	Lys	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly	Thr
65				70					75						80
Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met	Glu
			85					90						95	
Gly	Lys	Leu	His	Asp	Pro	Glu	Gly	Met	Gly	Ile	Ile	Pro	Arg	Ile	Val
		100					105						110		
Gln	Asp	Ile	Phe	Asn	Tyr	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu	Phe
	115						120					125			
His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg	Asp
	130					135					140				
Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys	Asn
145					150					155					160
Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Cys	Ser	Pro
			165					170						175	
Asp	Glu	Val	Met	Asp	Thr	Ile	Asp	Glu	Gly	Lys	Ser	Asn	Arg	His	Val
		180					185						190		
Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile	Phe
	195						200					205			
Leu	Ile	Asn	Val	Lys	Gln	Glu	Asn	Thr	Gln	Thr	Glu	Gln	Lys	Leu	Ser
	210					215					220				
Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser	Lys
225					230					235					240
Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn	Lys
			245					250						255	
Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly	Ser
		260					265						270		
Thr	Tyr	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu	Gln	Asp



Leu	Glu	Glu	Thr	Val	Ala	Lys	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu	Arg
785					790					795					800
Lys	Leu	Phe	Val	Gln	Asp	Leu	Ala	Thr	Arg	Val	Lys	Lys	Ser	Ala	Glu
				805					810					815	
Val	Asp	Ser	Asp	Asp	Thr	Gly	Gly	Ser	Ala	Ala	Gln	Lys	Gln	Lys	Ile
			820					825					830		
Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys	Gln
		835					840					845			
Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys	Leu	Glu
	850					855					860				
Phe	Arg	Leu	Arg	Ala	Thr	Ala	Glu	Arg	Val	Lys	Ala	Leu	Glu	Ser	Ala
865					870					875					880
Leu	Lys	Glu	Ala	Lys	Glu	Asn	Ala	Ser	Arg	Asp	Arg	Lys	Arg	Tyr	Gln
				885					890					895	
Gln	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Ser	Lys	Asn	Met	Ala
			900					905					910		
Arg	Arg	Gly	His	Ser	Ala	Gln	Ile	Ala	Lys	Pro	Ile	Arg	Pro	Gly	Gln
		915					920					925			
His	Pro	Ala	Ala	Ser	Pro	Thr	His	Pro	Gly	Thr	Val	Arg	Gly	Gly	Gly
	930					935					940				
Ser	Phe	Val	Gln	Asn	Asn	Gln	Pro	Val	Gly	Leu	Arg	Gly	Gly	Gly	Gly
945					950					955					960
Lys	Gln	Ser													

<210> 23  
 <211> 928  
 <212> PRT  
 <213> Neurospora crassa

<400> 23															
Met	Ser	Ser	Ser	Ala	Asn	Ser	Ile	Lys	Val	Val	Ala	Arg	Phe	Arg	Pro
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Gln	Asn	Arg	Val	Glu	Ile	Glu	Ser	Gly	Gly	Gln	Pro	Ile	Val	Thr	Phe
			20					25					30		
Gln	Gly	Pro	Asp	Thr	Cys	Thr	Val	Asp	Ser	Lys	Glu	Ala	Gln	Gly	Ser
		35					40					45			
Phe	Thr	Phe	Asp	Arg	Val	Phe	Asp	Met	Ser	Cys	Lys	Gln	Ser	Asp	Ile
	50					55				60					
Phe	Asp	Phe	Ser	Ile	Lys	Pro	Thr	Val	Asp	Asp	Ile	Leu	Asn	Gly	Tyr
65					70				75						80
Asn	Gly	Thr	Val	Phe	Ala	Tyr	Gly	Gln	Thr	Gly	Ala	Gly	Lys	Ser	Tyr
			85						90					95	
Thr	Met	Met	Gly	Thr	Ser	Ile	Asp	Asp	Pro	Asp	Gly	Arg	Gly	Val	Ile
			100					105					110		
Pro	Arg	Ile	Val	Glu	Gln	Ile	Phe	Thr	Ser	Ile	Leu	Ser	Ser	Ala	Ala
		115					120					125			
Asn	Ile	Glu	Tyr	Thr	Val	Arg	Val	Ser	Tyr	Met	Glu	Ile	Tyr	Met	Glu
	130					135					140				
Arg	Ile	Arg	Asp	Leu	Leu	Ala	Pro	Gln	Asn	Asp	Asn	Leu	Pro	Val	His
145					150					155					160
Glu	Glu	Lys	Asn	Arg	Gly	Val	Tyr	Val	Lys	Gly	Leu	Leu	Glu	Ile	Tyr
			165						170					175	
Val	Ser	Ser	Val	Gln	Glu	Val	Tyr	Glu	Val	Met	Arg	Arg	Gly	Gly	Asn
			180					185					190		
Ala	Arg	Ala	Val	Ala	Ala	Thr	Asn	Met	Asn	Gln	Glu	Ser	Ser	Arg	Ser
		195					200					205			
His	Ser	Ile	Phe	Val	Ile	Thr	Ile	Thr	Gln	Lys	Asn	Val	Glu	Thr	Gly
	210					215					220				
Ser	Ala	Lys	Ser	Gly	Gln	Leu	Phe	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu
225					230					235					240
Lys	Val	Gly	Lys	Thr	Gly	Ala	Ser	Gly	Gln	Thr	Leu	Glu	Glu	Ala	Lys

				245					250					255			
Lys	Ile	Asn	Lys	Ser	Leu	Ser	Ala	Leu	Gly	Met	Val	Ile	Asn	Ala	Leu		
			260					265					270				
Thr	Asp	Gly	Lys	Ser	Ser	His	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Leu	Thr		
		275					280					285					
Arg	Ile	Leu	Gln	Glu	Ser	Leu	Gly	Gly	Asn	Ser	Arg	Thr	Thr	Leu	Ile		
	290					295					300						
Ile	Asn	Cys	Ser	Pro	Ser	Ser	Tyr	Asn	Asp	Ala	Glu	Thr	Leu	Ser	Thr		
305					310					315					320		
Leu	Arg	Phe	Gly	Met	Arg	Ala	Lys	Ser	Ile	Lys	Asn	Lys	Ala	Lys	Val		
				325					330					335			
Asn	Ala	Glu	Leu	Ser	Pro	Ala	Glu	Leu	Lys	Gln	Met	Leu	Ala	Lys	Ala		
			340					345					350				
Lys	Thr	Gln	Ile	Thr	Ser	Phe	Glu	Asn	Tyr	Ile	Val	Asn	Leu	Glu	Ser		
		355					360					365					
Glu	Val	Gln	Val	Trp	Arg	Gly	Gly	Glu	Thr	Val	Pro	Lys	Glu	Lys	Trp		
	370					375					380						
Val	Pro	Pro	Leu	Glu	Leu	Ala	Ile	Thr	Pro	Ser	Lys	Ser	Ala	Ser	Thr		
385					390					395					400		
Thr	Ala	Arg	Pro	Ser	Thr	Pro	Ser	Arg	Leu	Pro	Glu	Ser	Arg	Ala			
				405					410					415			
Glu	Thr	Pro	Ala	Ile	Ser	Asp	Arg	Ala	Gly	Thr	Pro	Ser	Leu	Pro	Leu		
			420					425					430				
Asp	Lys	Asp	Glu	Arg	Glu	Glu	Phe	Leu	Arg	Arg	Glu	Asn	Glu	Leu	Gln		
		435					440					445					
Asp	Gln	Ile	Ala	Glu	Lys	Glu	Ser	Ile	Ala	Ala	Ala	Glu	Arg	Gln			
	450					455					460						
Leu	Arg	Glu	Thr	Lys	Glu	Glu	Leu	Ile	Ala	Leu	Lys	Asp	His	Asp	Ser		
465					470					475					480		
Lys	Leu	Gly	Lys	Glu	Asn	Glu	Arg	Leu	Ile	Ser	Glu	Ser	Asn	Glu	Phe		
				485					490					495			
Lys	Met	Gln	Leu	Glu	Arg	Leu	Ala	Phe	Glu	Asn	Lys	Glu	Ala	Gln	Ile		
			500					505					510				
Thr	Ile	Asp	Gly	Leu	Lys	Asp	Ala	Asn	Ser	Glu	Leu	Thr	Ala	Glu	Leu		
		515					520					525					
Asp	Glu	Val	Lys	Gln	Gln	Met	Leu	Asp	Met	Lys	Met	Ser	Ala	Lys	Glu		
		530				535					540						
Thr	Ser	Ala	Val	Leu	Asp	Glu	Lys	Glu	Lys	Lys	Lys	Ala	Glu	Lys	Met		
545					550					555					560		
Ala	Lys	Met	Met	Ala	Gly	Phe	Asp	Leu	Ser	Gly	Asp	Val	Phe	Ser	Asp		
				565					570					575			
Asn	Glu	Arg	Ala	Val	Ala	Asp	Ala	Ile	Ala	Gln	Leu	Asp	Ala	Leu	Phe		
			580					585					590				
Glu	Ile	Ser	Ser	Ala	Gly	Asp	Ala	Ile	Pro	Pro	Glu	Asp	Ile	Lys	Ala		
		595				600						605					
Leu	Arg	Glu	Lys	Leu	Val	Glu	Thr	Gln	Gly	Phe	Val	Arg	Gln	Ala	Glu		
	610					615					620						
Leu	Ser	Ser	Phe	Ser	Ala	Ala	Ser	Ser	Asp	Ala	Glu	Ala	Arg	Lys	Arg		
625					630					635					640		
Ala	Glu	Leu	Glu	Ala	Arg	Leu	Glu	Ala	Leu	Gln	Gln	Glu	His	Glu	Glu		
				645					650					655			
Leu	Leu	Ser	Arg	Asn	Leu	Thr	Glu	Ala	Asp	Lys	Glu	Glu	Val	Lys	Ala		
			660					665					670				
Leu	Leu	Ala	Lys	Ser	Leu	Ser	Asp	Lys	Ser	Ala	Val	Gln	Val	Glu	Leu		
		675					680					685					
Val	Glu	Gln	Leu	Lys	Ala	Asp	Ile	Ala	Leu	Lys	Asn	Ser	Glu	Thr	Glu		
	690					695					700						
His	Leu	Lys	Ala	Leu	Val	Asp	Asp	Leu	Gln	Arg	Arg	Val	Lys	Ala	Gly		
705					710					715					720		
Gly	Ala	Gly	Val	Ala	Met	Ala	Asn	Gly	Lys	Thr	Val	Gln	Gln	Gln	Leu		
				725				730						735			
Ala	Glu	Phe	Asp	Val	Met	Lys	Lys	Ser	Leu	Met	Arg	Asp	Leu	Gln	Asn		
			740					745					750				

Arg	Cys	Glu	Arg	Val	Val	Glu	Leu	Glu	Ile	Ser	Leu	Asp	Glu	Thr	Arg
		755					760					765			
Glu	Gln	Tyr	Asn	Asn	Val	Leu	Arg	Ser	Ser	Asn	Asn	Arg	Ala	Gln	Gln
		770					775					780			
Lys	Lys	Met	Ala	Phe	Leu	Glu	Arg	Asn	Leu	Glu	Gln	Leu	Thr	Gln	Val
		785					790				795				800
Gln	Arg	Gln	Leu	Val	Glu	Gln	Asn	Ser	Ala	Leu	Lys	Lys	Glu	Val	Ala
				805					810					815	
Ile	Ala	Glu	Arg	Lys	Leu	Met	Ala	Arg	Asn	Glu	Arg	Ile	Gln	Ser	Leu
			820					825					830		
Glu	Ser	Leu	Leu	Gln	Glu	Ser	Gln	Glu	Lys	Met	Ala	Gln	Ala	Asn	His
			835					840					845		
Lys	Phe	Glu	Val	Gln	Leu	Ala	Ala	Val	Lys	Asp	Arg	Leu	Glu	Ala	Ala
			850				855				860				
Lys	Ala	Gly	Ser	Thr	Arg	Gly	Leu	Gly	Thr	Asp	Ala	Gly	Leu	Gly	Gly
					870					875					880
Phe	Ser	Ile	Gly	Ser	Arg	Ile	Ala	Lys	Pro	Leu	Arg	Gly	Gly	Gly	Asp
				885					890					895	
Ala	Val	Ala	Gly	Ala	Thr	Ala	Thr	Asn	Pro	Thr	Ile	Ala	Thr	Leu	Gln
			900					905					910		
Gln	Asn	Pro	Pro	Glu	Asn	Lys	Arg	Ser	Ser	Trp	Phe	Phe	Gln	Lys	Ser
			915				920					925			

<210> 24  
 <211> 1031  
 <212> PRT  
 <213> Strongylocentrotus purpuratus

<400> 24															
Met	Ala	Asp	Pro	Ala	Glu	Cys	Asn	Ile	Lys	Val	Val	Cys	Arg	Val	Arg
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Pro	Met	Asn	Ala	Thr	Glu	Gln	Asn	Thr	Ser	His	Ile	Cys	Thr	Lys	Phe
			20					25					30		
Ile	Ser	Glu	Glu	Gln	Val	Gln	Ile	Gly	Gly	Lys	Leu	Asn	Met	Phe	Asp
			35				40					45			
Arg	Ile	Phe	Lys	Pro	Asn	Thr	Thr	Gln	Glu	Glu	Val	Tyr	Asn	Lys	Ala
			50			55					60				
Ala	Arg	Gln	Ile	Val	Lys	Asp	Val	Leu	Asp	Gly	Tyr	Asn	Gly	Thr	Ile
					70				75						80
Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	Phe	Thr	Met	Glu	Gly
				85					90					95	
Val	Met	Gly	Asn	Pro	Gln	Tyr	Met	Gly	Ile	Ile	Pro	Arg	Ile	Val	Gln
			100					105					110		
Asp	Ile	Phe	Asn	His	Ile	Tyr	Gln	Met	Asp	Glu	Ser	Leu	Glu	Phe	His
			115				120					125			
Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Met	Asp	Arg	Ile	Arg	Asp	Leu
			130			135					140				
Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys	Asn	Arg
					150					155					160
Val	Pro	Phe	Val	Lys	Gly	Ala	Thr	Glu	Arg	Phe	Ala	Ser	Ser	Pro	Glu
				165					170					175	
Glu	Val	Met	Asp	Val	Ile	Glu	Glu	Gly	Lys	Ser	Asn	Arg	His	Ile	Ala
			180					185					190		
Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile	Phe	Leu
			195				200					205			
Ile	Gln	Val	Lys	Gln	Glu	Asn	Met	Glu	Thr	Lys	Lys	Lys	Leu	Ser	Gly
						215					220				
Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser	Lys	Thr
					230					235					240
Gly	Ala	Glu	Gly	Thr	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn	Lys	Ser
				245					250					255	
Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Asp	Gly	Lys	Lys

			260					265					270				
Ser	His	Ile	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu	Gln	Glu		
		275					280					285					
Ser	Leu	Gly	Gly	Asn	Ala	Arg	Thr	Thr	Ile	Val	Ile	Cys	Cys	Ser	Pro		
	290					295					300						
Ser	Ser	Phe	Asn	Glu	Ser	Glu	Ser	Lys	Ser	Thr	Leu	Met	Phe	Gly	Gln		
305					310					315					320		
Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Val	Thr	Val	Asn	Met	Glu	Leu	Thr		
				325					330						335		
Ala	Glu	Glu	Trp	Arg	Asn	Arg	Tyr	Glu	Lys	Glu	Lys	Glu	Lys	Asn	Gly		
			340					345					350				
Arg	Leu	Lys	Ala	Gln	Leu	Leu	Ile	Leu	Glu	Asn	Glu	Leu	Gln	Arg	Trp		
	355						360					365					
Arg	Ala	Gly	Glu	Ser	Val	Pro	Val	Lys	Glu	Gln	Gly	Asn	Lys	Asn	Asp		
	370					375					380						
Glu	Ile	Leu	Lys	Glu	Met	Met	Lys	Pro	Lys	Gln	Met	Thr	Val	His	Val		
385					390					395					400		
Ser	Glu	Glu	Glu	Lys	Asn	Lys	Trp	Glu	Glu	Glu	Lys	Val	Lys	Leu	Tyr		
				405				410						415			
Glu	Gln	Leu	Asp	Glu	Lys	Asp	Ser	Glu	Ile	Asp	Asn	Gln	Ser	Arg	Leu		
			420					425					430				
Thr	Glu	Lys	Leu	Lys	Gln	Gln	Met	Leu	Glu	Gln	Glu	Glu	Leu	Leu	Ser		
	435						440					445					
Ser	Met	Gln	Arg	Asp	Tyr	Glu	Leu	Leu	Gln	Ser	Gln	Met	Gly	Arg	Leu		
	450					455					460						
Glu	Ala	Glu	Asn	Ala	Ala	Lys	Glu	Glu	Ala	Lys	Glu	Val	Leu	Gln			
465					470				475					480			
Ala	Leu	Glu	Glu	Met	Ala	Val	Asn	Tyr	Asp	Glu	Lys	Ser	Lys	Glu	Val		
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Glu	Asp	Lys	Asn	Arg	Met	Asn	Glu	Thr	Leu	Ser	Glu	Glu	Val	Asn	Glu		
			500					505					510				
Lys	Met	Thr	Ala	Leu	His	Thr	Thr	Ser	Thr	Glu	Leu	Gln	Lys	Leu	Gln		
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Ala	Asp	Met	Lys	Pro	Asn	Val	Glu	Asn	Ile	Glu	Lys	Val	Asp	Glu	Glu		
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Phe	Thr	Met	Ala	Arg	Leu	Phe	Val	Ser	Lys	Met	Lys	Thr	Glu	Val	Lys		
			580					585					590				
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Glu	Thr	Lys	Ile	Arg	Thr	Ser	Glu	Asp	Glu	Leu	Asp	Ser	Cys	Arg	Met		
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			660					665					670				
Thr	Asp	Gln	Glu	Asp	Lys	Lys	Arg	Glu	Glu	Glu	Asp	Lys	Met	Gln	Ser		
	675						680					685					
Ala	Thr	Glu	Met	Gln	Ala	Ser	Met	Ser	Glu	Gln	Met	Glu	Ser	His	Arg		
	690					695					700						
Asp	Ala	His	Gln	Lys	Gln	Leu	Ala	Asn	Leu	Arg	Thr	Glu	Ile	Asn	Glu		
705					710				715					720			
Lys	Glu	His	Gln	Met	Glu	Glu	Leu	Lys	Asp	Val	Asn	Gln	Arg	Met	Thr		
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Leu	Gln	His	Glu	Lys	Leu	Gln	Leu	Asp	Tyr	Glu	Lys	Leu	Lys	Ile	Glu		
			740					745					750				
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	755						760					765					



Arg	Arg	Glu	Gln	Ala	Lys	Gln	Asp	Leu	Lys	Gly	Leu	Glu	Glu	Thr	Val
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Ala	Lys	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu	Arg	Lys	Leu	Phe	Val	Ser
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Asp	Leu	Gln	Asn	Arg	Val	Lys	Lys	Ala	Leu	Glu	Gly	Gly	Asp	Arg	Asp
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Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys	Gln	Leu	Val	Arg
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865					870					875					880
Thr	Lys	Glu	Gly	Ala	Met	Arg	Asp	Arg	Lys	Arg	Tyr	Gln	Gln	Glu	Val
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Ser	Ser	Ala	Gln	Ile	Ala	Lys	Ala	Ile	Arg	Ala	Gly	His	Pro	Pro	Pro
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Pro	Pro	Gly	Gly	Asn	Lys	Leu	Thr	Glu	Ser	Asp	Ile	Ala	Ala	Met	Lys
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 <212> PRT  
 <213> Syncephalastrum racemosum

<400> 25															
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Glu	Gly	Thr	Gln	Leu	Glu	Leu	Lys	Gly	Lys	Glu	Phe	Lys	Gly	Asn	Phe
		35					40					45			
Asn	Phe	Asp	Lys	Val	Phe	Gly	Met	Asn	Thr	Ala	Gln	Lys	Asp	Val	Phe
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Asp	Tyr	Ser	Ile	Lys	Thr	Ile	Val	Asp	Asp	Val	Thr	Ala	Gly	Tyr	Asn
65					70					75					80
Gly	Thr	Val	Phe	Ala	Tyr	Gly	Gln	Thr	Gly	Ser	Gly	Lys	Thr	Phe	Thr
			85						90					95	
Met	Met	Gly	Ala	Asp	Ile	Asp	Asp	Glu	Lys	Thr	Lys	Gly	Ile	Ile	Pro
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Leu	Glu	Phe	Thr	Val	Lys	Val	Ser	Tyr	Met	Glu	Ile	Tyr	Met	Glu	Lys
	130					135					140				
Val	Arg	Asp	Leu	Leu	Asn	Pro	Ser	Ser	Glu	Asn	Leu	Pro	Ile	His	Glu
145					150					155					160
Asp	Lys	Thr	Lys	Gly	Val	Tyr	Val	Lys	Gly	Leu	Leu	Glu	Val	Tyr	Val

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Gly	Ser	Thr	Asp	Glu	Val	Tyr	Glu	Val	Met	Arg	Arg	Gly	Ser	Asn	Asn		
			180						185					190			
Arg	Val	Val	Ala	Tyr	Thr	Asn	Met	Asn	Ala	Glu	Ser	Ser	Arg	Ser	His		
		195					200					205					
Ser	Ile	Val	Met	Phe	Thr	Ile	Thr	Gln	Lys	Asn	Val	Asp	Thr	Gly	Ala		
	210					215					220						
Ala	Lys	Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys		
225					230				235						240		
Val	Gly	Lys	Thr	Gly	Ala	Ser	Gly	Gln	Thr	Leu	Glu	Glu	Ala	Lys	Lys		
				245					250					255			
Ile	Asn	Lys	Ser	Leu	Thr	Ala	Leu	Gly	Met	Val	Ile	Asn	Ala	Leu	Thr		
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Asp	Gly	Lys	Ser	Ser	His	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Leu	Thr	Arg		
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Ile	Leu	Gln	Glu	Ser	Leu	Gly	Gly	Asn	Ser	Arg	Thr	Thr	Leu	Ile	Ile		
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Asn	Cys	Ser	Pro	Ser	Ser	Tyr	Asn	Glu	Ala	Glu	Thr	Leu	Ser	Thr	Leu		
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Arg	Phe	Gly	Ala	Arg	Ala	Lys	Ser	Ile	Lys	Asn	Lys	Ala	Lys	Val	Asn		
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Ala	Asp	Leu	Ser	Pro	Ala	Glu	Leu	Lys	Ala	Leu	Leu	Lys	Lys	Val	Lys		
			340					345					350				
Ser	Glu	Ala	Val	Thr	Tyr	Gln	Thr	Tyr	Ile	Ala	Ala	Leu	Glu	Gly	Glu		
	355						360					365					
Val	Asn	Val	Trp	Arg	Thr	Gly	Gly	Thr	Val	Pro	Glu	Gly	Lys	Trp	Val		
	370					375					380						
Thr	Met	Asp	Lys	Val	Ser	Lys	Gly	Asp	Phe	Ala	Gly	Leu	Pro	Pro	Ala		
385					390				395						400		
Pro	Gly	Phe	Lys	Ser	Pro	Val	Ser	Asp	Glu	Gly	Ser	Arg	Pro	Ala	Thr		
				405				410						415			
Pro	Val	Pro	Thr	Leu	Glu	Lys	Asp	Glu	Arg	Glu	Glu	Phe	Ile	Lys	Arg		
			420					425					430				
Glu	Asn	Glu	Leu	Met	Asp	Gln	Ile	Ser	Glu	Lys	Glu	Thr	Glu	Leu	Thr		
		435				440						445					
Asn	Arg	Glu	Lys	Leu	Leu	Glu	Ser	Leu	Arg	Glu	Glu	Met	Gly	Tyr	Tyr		
	450					455					460						
Lys	Glu	Gln	Glu	Gln	Ser	Val	Thr	Lys	Glu	Asn	Gln	Gln	Met	Thr	Ser		
465					470					475					480		
Glu	Leu	Ser	Glu	Leu	Arg	Leu	Gln	Leu	Gln	Lys	Val	Ser	Tyr	Glu	Ser		
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Lys	Glu	Asn	Ala	Ile	Thr	Val	Asp	Ser	Leu	Lys	Glu	Ala	Asn	Gln	Asp		
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Gln	Ala	His	Lys	Asp	Ala	Thr	Asp	Ser	Asp	Lys	Glu	Lys	Arg	Lys	Ala		
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Glu	Lys	Met	Ala	Gln	Met	Met	Ser	Gly	Phe	Asp	Pro	Ser	Gly	Ile	Leu		
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		595					600					605					
Ser	Asp	Leu	Ser	Ala	Asp	Lys	Asp	Ala	Met	Glu	Ala	Lys	Lys	Ile	Glu		
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625					630					635					640		
Asp	Lys	Thr	Ile	Ala	Glu	Glu	Glu	Ala	Asn	Met	Gln	Asn	Ala	Asp	Val		
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Asp	Asn	Leu	Ser	Ala	Leu	Lys	Thr	Lys	Leu	Glu	Ala	Gln	Tyr	Ala	Glu		
			660					665					670				

Lys	Lys	Glu	Val	Gln	Gln	Lys	Glu	Ile	Asp	Asp	Leu	Lys	Arg	Glu	Leu
		675					680					685			
Asp	Arg	Lys	Gln	Ser	Gly	His	Glu	Lys	Leu	Ser	Ala	Ala	Met	Thr	Asp
	690					695					700				
Leu	Arg	Ala	Ala	Asn	Asp	Gln	Leu	Gln	Ala	Ala	Leu	Ser	Glu	Gln	Pro
705					710					715					720
Phe	Gln	Ala	Pro	Gln	Asp	Asn	Ser	Asp	Met	Thr	Glu	Lys	Glu	Lys	Asp
				725					730					735	
Ile	Glu	Arg	Thr	Arg	Lys	Ser	Met	Ala	Gln	Gln	Leu	Ala	Asp	Phe	Glu
			740					745					750		
Val	Met	Lys	Lys	Ala	Leu	Met	Arg	Asp	Leu	Gln	Asn	Arg	Cys	Glu	Lys
	755						760					765			
Val	Val	Glu	Leu	Glu	Met	Ser	Leu	Asp	Glu	Thr	Arg	Glu	Gln	Tyr	Asn
	770					775					780				
Asn	Val	Leu	Arg	Ala	Ser	Asn	Asn	Lys	Ala	Gln	Gln	Lys	Lys	Met	Ala
785					790					795					800
Phe	Leu	Glu	Arg	Asn	Leu	Glu	Gln	Leu	Thr	Asn	Val	Gln	Lys	Gln	Leu
				805					810					815	
Val	Glu	Gln	Asn	Ala	Ser	Leu	Lys	Lys	Glu	Val	Ala	Leu	Ala	Glu	Arg
			820					825					830		
Lys	Leu	Ile	Ala	Arg	Asn	Glu	Arg	Ile	Gln	Ser	Leu	Glu	Thr	Leu	Leu
		835					840					845			
His	Asn	Ala	Gln	Asp	Lys	Leu	Leu	Asn	Gln	Asn	Lys	Lys	Phe	Glu	Gln
	850					855					860				
Gln	Leu	Ala	Thr	Val	Arg	Glu	Arg	Leu	Glu	Gln	Ala	Arg	Ser	Gln	Lys
865					870					875					880
Ser	Gln	Asn	Ser	Leu	Ala	Ala	Leu	Asn	Phe	Ser	Arg	Ile	Ala	Lys	Pro
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Leu	Arg	Gly	Asn	Gly	Ala	Ala	Ile	Asp	Asn	Gly	Ser	Asp	Asp	Gly	Ser
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Leu	Pro	Thr	Ser	Pro	Thr	Asp	Lys	Arg	Asp	Lys	Arg	Ser	Ser	Trp	Met
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 <212> PRT  
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<400> 26

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Ile	Phe	Gln	Gly	Asp	Asp	Ser	Val	Val	Ile	Gly	Gly	Lys	Pro	Tyr	Val
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Phe	Asp	Arg	Val	Phe	Pro	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val	Tyr	His
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Ala	Cys	Ala	Met	Gln	Ile	Val	Lys	Asp	Val	Leu	Ala	Gly	Tyr	Asn	Gly
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Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met
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Ala	Arg	Asp	Ile	Phe	Asn	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu
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Phe	His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg
	130					135					140				
Asp	Leu	Leu	Asp	Val	Thr	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys
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Asn	Arg	Val	Pro	Phe	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Ser	Ser

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Pro	Glu	Glu	Ile	Leu	Asp	Val	Ile	Asp	Glu	Gly	Lys	Ser	Asn	Arg	His		
			180					185					190				
Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile		
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Phe	Leu	Ile	Asn	Ile	Lys	Gln	Glu	Asn	Met	Glu	Thr	Glu	Gln	Lys	Leu		
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Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser		
	225				230					235					240		
Lys	Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn		
			245					250						255			
Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly		
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Thr	Lys	Ser	Tyr	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu		
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Gln	Asp	Ser	Leu	Gly	Gly	Asn	Cys	Arg	Thr	Thr	Met	Phe	Ile	Cys	Cys		
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Gly	Gln	Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Ala	Ser	Val	Asn	Leu	Glu		
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Tyr	Glu	Glu	Glu	Ile	Arg	Arg	Leu	Tyr	Lys	Gln	Leu	Asp	Asp	Lys	Asp		
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Asp	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Leu	Ile	Glu	Lys	Leu	Lys	Gln	Gln		
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Met	Leu	Asp	Gln	Glu	Glu	Leu	Leu	Val	Ser	Thr	Arg	Gly	Asp	Asn	Glu		
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Phe	Ser	Val	Ile	Val	Gly	Asn	Gly	Glu	Ile	Lys	Leu	Pro	Val	Glu	Ile		
			565					570						575			
Ser	Gly	Ala	Ile	Glu	Glu	Glu	Phe	Thr	Val	Ala	Arg	Leu	Tyr	Ile	Ser		
		580						585					590				
Lys	Ile	Lys	Ser	Glu	Val	Lys	Ser	Val	Val	Lys	Arg	Cys	Arg	Gln	Leu		
		595					600					605					
Glu	Asn	Leu	Gln	Val	Glu	Cys	His	Arg	Lys	Met	Glu	Val	Thr	Gly	Arg		
	610					615					620						
Glu	Leu	Ser	Ser	Cys	Gln	Leu	Leu	Ile	Ser	Gln	His	Glu	Ala	Lys	Ile		
	625				630					635					640		
Arg	Ser	Leu	Thr	Glu	Tyr	Met	Gln	Ser	Val	Glu	Leu	Lys	Lys	Arg	His		
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Leu	Glu	Glu	Ser	Tyr	Asp	Ser	Leu	Ser	Asp	Glu	Leu	Ala	Lys	Leu	Gln		
		660						665					670				

Ala	Gln	Glu	Thr	Val	His	Glu	Val	Ala	Leu	Lys	Asp	Lys	Glu	Pro	Asp	
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Thr	Gln	Asp	Ala	Asp	Glu	Val	Lys	Lys	Ala	Leu	Glu	Leu	Gln	Met	Glu	
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Ser	His	Arg	Glu	Ala	His	His	Arg	Gln	Leu	Ala	Arg	Leu	Arg	Asp	Glu	
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Ile	Asn	Glu	Lys	Gln	Lys	Thr	Ile	Asp	Glu	Leu	Lys	Asp	Leu	Asn	Gln	
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Lys	Leu	Gln	Leu	Glu	Leu	Glu	Lys	Leu	Gln	Ala	Asp	Tyr	Glu	Lys	Leu	
			740					745					750			
Lys	Ser	Glu	Glu	His	Glu	Lys	Ser	Thr	Lys	Leu	Gln	Glu	Leu	Thr	Phe	
		755					760					765				
Leu	Tyr	Glu	Arg	His	Glu	Gln	Ser	Lys	Gln	Asp	Leu	Lys	Gly	Leu	Glu	
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Glu	Thr	Val	Ala	Arg	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu	Arg	Lys	Leu	
785					790					795						800
Phe	Val	Gln	Asp	Val	Thr	Thr	Arg	Val	Lys	Lys	Ser	Ala	Glu	Met	Glu	
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Pro	Glu	Asp	Ser	Gly	Gly	Ile	His	Ser	Gln	Lys	Gln	Lys	Ile	Ser	Phe	
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Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys	Gln	Leu	Val	
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Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys	Leu	Glu	Lys	Arg	
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Leu	Arg	Ala	Thr	Ala	Glu	Arg	Val	Lys	Ala	Leu	Glu	Gly	Ala	Leu	Lys	
865					870					875					880	
Glu	Ala	Lys	Glu	Gly	Ala	Met	Lys	Asp	Lys	Arg	Arg	Tyr	Gln	Gln	Glu	
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Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Tyr	Lys	Ser	Ser	Gly	Lys	Arg	
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Ala	His	Ser	Ala	Gln	Ile	Ala	Lys	Pro	Val	Arg	Pro	Gly	His	Tyr	Pro	
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Ala	Ser	Ser	Pro	Thr	Asn	Pro	Tyr	Gly	Thr	Arg	Ser	Pro	Glu	Cys	Ile	
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Ser	Tyr	Thr	Asn	Ser	Leu	Phe	Gln	Asn	Tyr	Gln	Asn	Leu	Tyr	Leu	Gln	
945					950					955					960	
Ala	Thr	Pro	Ser	Ser	Thr	Ser	Asp	Met	Tyr	Phe	Ala	Asn	Ser	Cys	Thr	
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Ser	Ser	Gly	Ala	Thr	Ser	Ser	Gly	Gly	Pro	Leu	Ala	Ser	Tyr	Gln	Lys	
			980					985					990			
Ala	Asn	Met	Asp	Asn	Gly	Asn	Ala	Thr	Asp	Ile	Asn	Asp	Asn	Arg	Ser	
		995					1000					1005				
Asp	Leu	Pro	Cys	Gly	Tyr	Glu	Ala	Glu	Asp	Gln	Ala	Lys	Leu	Phe	Pro	
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 <212> PRT  
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 Ile Phe Gln Gly Asp Asp Ser Val Ile Ile Gly Gly Lys Pro Tyr Val  
 35 40 45  
 Phe Asp Arg Val Phe Pro Pro Asn Thr Thr Gln Glu Gln Val Tyr His  
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 Ala Cys Ala Met Gln Ile Val Lys Asp Val Leu Ala Gly Tyr Asn Gly

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Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met
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Glu	Gly	Lys	Leu	His	Asp	Pro	Gln	Leu	Met	Gly	Ile	Ile	Pro	Arg	Ile
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Ala	Arg	Asp	Ile	Phe	Asn	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu
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Phe	His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg
	130					135					140				
Asp	Leu	Leu	Asp	Val	Thr	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys
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Asn	Arg	Val	Pro	Phe	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Ser	Ser
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Pro	Glu	Glu	Ile	Leu	Asp	Val	Ile	Asp	Glu	Gly	Lys	Ser	Asn	Arg	His
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Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile
		195					200					205			
Phe	Leu	Ile	Asn	Ile	Lys	Gln	Glu	Asn	Val	Glu	Thr	Glu	Gln	Lys	Leu
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Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser
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Lys	Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn
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Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly
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Thr	Lys	Ser	Tyr	Val	Pro	Tyr	Arg	Asp	Thr	Lys	Met	Thr	Arg	Ile	Leu
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Gln	Asp	Ser	Leu	Gly	Gly	Asn	Cys	Arg	Thr	Thr	Met	Phe	Ile	Cys	Cys
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Ser	Pro	Ser	Ser	Tyr	Asn	Asp	Ala	Glu	Thr	Lys	Ser	Thr	Leu	Met	Phe
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Gly	Gln	Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Ala	Ser	Val	Asn	Leu	Glu
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Leu	Thr	Ala	Glu	Gln	Trp	Lys	Lys	Lys	Tyr	Glu	Lys	Glu	Lys	Glu	Lys
			340					345					350		
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Arg	Trp	Arg	Asn	Gly	Glu	Asn	Val	Pro	Glu	Thr	Glu	Arg	Leu	Ala	Gly
	370					375					380				
Glu	Asp	Ser	Ala	Leu	Gly	Ala	Glu	Leu	Cys	Glu	Glu	Thr	Pro	Val	Asn
385					390					395					400
Asp	Asn	Ser	Ser	Ile	Val	Val	Arg	Ile	Ala	Pro	Glu	Glu	Arg	Gln	Lys
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Tyr	Glu	Glu	Glu	Ile	Arg	Arg	Leu	Tyr	Lys	Gln	Leu	Asp	Asp	Lys	Asp
			420					425					430		
Asp	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Leu	Ile	Glu	Lys	Leu	Lys	Gln	Gln
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Met	Leu	Asp	Gln	Glu	Glu	Leu	Leu	Val	Ser	Thr	Arg	Gly	Asp	Asn	Glu
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Lys	Val	Gln	Arg	Glu	Leu	Ser	His	Leu	Gln	Ser	Glu	Asn	Asp	Ala	Ala
465					470					475					480
Lys	Asp	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu	Glu	Leu	Ala	Val
				485					490					495	
Asn	Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Glu	Lys	Ser	Gln	Gln	Asn
			500					505					510		
Gln	Leu	Leu	Val	Asp	Glu	Leu	Ser	Gln	Lys	Val	Ala	Thr	Met	Leu	Ser
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Lys	Arg	Ile	Ala	Glu	Val	Leu	Asn	Gly	Leu	Met	Arg	Asp	Leu	Ser	Glu
545					550					555					560
Phe	Ser	Val	Ile	Val	Gly	Asn	Gly	Glu	Ile	Lys	Leu	Pro	Val	Glu	Ile
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Ser Gly Ala Ile Glu Glu Glu Phe Thr Val Ala Arg Leu Tyr Ile Ser  
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 Lys Ile Lys Ser Glu Val Lys Ser Val Val Lys Arg Cys Arg Gln Leu  
 595 600 605  
 Glu Asn Leu Gln Val Glu Cys His Arg Lys Met Glu Val Thr Gly Arg  
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 Glu Leu Ser Ser Cys Gln Leu Leu Ile Ser Gln His Glu Ala Lys Ile  
 625 630 635 640  
 Arg Ser Leu Thr Glu Tyr Met Gln Thr Val Glu Leu Lys Lys Arg His  
 645 650 655  
 Leu Glu Glu Ser Tyr Asp Ser Leu Ser Asp Glu Leu Ala Arg Leu Gln  
 660 665 670  
 Ala His Glu Thr Val His Glu Val Ala Leu Lys Asp Lys Glu Pro Asp  
 675 680 685  
 Thr Gln Asp Ala Glu Glu Val Lys Lys Ala Leu Glu Leu Gln Met Glu  
 690 695 700  
 Asn His Arg Glu Ala His His Arg Gln Leu Ala Arg Leu Arg Asp Glu  
 705 710 715 720  
 Ile Asn Glu Lys Gln Lys Thr Ile Asp Glu Leu Lys Asp Leu Asn Gln  
 725 730 735  
 Lys Leu Gln Leu Glu Leu Glu Lys Leu Gln Ala Asp Tyr Glu Arg Leu  
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 Lys Asn Glu Glu Asn Glu Lys Ser Ala Lys Leu Gln Glu Leu Thr Phe  
 755 760 765  
 Leu Tyr Glu Arg His Glu Gln Ser Lys Gln Asp Leu Lys Gly Leu Glu  
 770 775 780  
 Glu Thr Val Ala Arg Glu Leu Gln Thr Leu His Asn Leu Arg Lys Leu  
 785 790 795 800  
 Phe Val Gln Asp Val Thr Thr Arg Val Lys Lys Ser Ala Glu Met Glu  
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 Pro Glu Asp Ser Gly Gly Ile His Ser Gln Lys Gln Lys Ile Ser Phe  
 820 825 830  
 Leu Glu Asn Asn Leu Glu Gln Leu Thr Lys Val His Lys Gln Leu Val  
 835 840 845  
 Arg Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys Leu Glu Lys Arg  
 850 855 860  
 Leu Arg Ala Thr Ala Glu Arg Val Lys Ala Leu Glu Gly Ala Leu Lys  
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 Glu Ala Lys Glu Gly Ala Met Lys Asp Lys Arg Arg Tyr Gln Gln Glu  
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 Val Asp Arg Ile Lys Glu Ala Val Arg Tyr Lys Ser Ser Gly Lys Arg  
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 Gly His Ser Ala Gln Ile Ala Lys Pro Val Arg Pro Gly His Tyr Pro  
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 Ala Ser Ser Pro Thr Asn Pro Tyr Gly Thr Arg Ser Pro Glu Cys Ile  
 930 935 940  
 Ser Tyr Thr Asn Asn Leu Phe Gln Asn Tyr Gln Asn Leu His Leu Gln  
 945 950 955 960  
 Ala Ala Pro Ser Ser Thr Ser Asp Met Tyr Phe Ala Ser Ser Gly Arg  
 965 970 975  
 Thr Ser Val Ala Pro Leu Ala Ser Tyr Gln Lys Ala Asn Met Asp Asn  
 980 985 990  
 Gly Asn Ala Thr Asp Ile Asn Asp Asn Arg Ser Asp Leu Pro Cys Gly  
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<213> *Saccharomyces cerevisiae*

<400> 28

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Gly	Met	His	Thr	Leu	Thr	Pro	Pro	Thr	Cys	Asn	Asn	Gly	Ala	Ala	Thr		
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Ser	Asp	Ser	Asn	Ile	His	Val	Tyr	Val	Arg	Cys	Arg	Ser	Arg	Asn	Lys		
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Arg	Glu	Ile	Glu	Glu	Lys	Ser	Ser	Val	Val	Ile	Ser	Thr	Leu	Gly	Pro		
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Gln	Gly	Lys	Glu	Ile	Ile	Leu	Ser	Asn	Gly	Ser	His	Gln	Ser	Tyr	Ser		
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Ser	Ser	Lys	Lys	Thr	Tyr	Gln	Phe	Asp	Gln	Val	Phe	Gly	Ala	Glu	Ser		
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Asp	Gln	Glu	Thr	Val	Phe	Asn	Ala	Thr	Ala	Lys	Asn	Tyr	Ile	Lys	Glu		
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Met	Leu	His	Gly	Tyr	Asn	Cys	Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Gly		
	130					135					140						
Thr	Gly	Lys	Thr	Tyr	Thr	Met	Ser	Gly	Asp	Ile	Asn	Ile	Leu	Gly	Asp		
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Val	Gln	Ser	Thr	Asp	Asn	Leu	Leu	Leu	Gly	Glu	His	Ala	Gly	Ile	Ile		
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Pro	Arg	Val	Leu	Val	Asp	Leu	Phe	Lys	Glu	Leu	Ser	Ser	Leu	Asn	Lys		
			180					185					190				
Glu	Tyr	Ser	Val	Lys	Ile	Ser	Phe	Leu	Glu	Leu	Tyr	Asn	Glu	Asn	Leu		
		195					200					205					
Lys	Asp	Leu	Leu	Ser	Asp	Ser	Glu	Asp	Asp	Asp	Pro	Ala	Val	Asn	Asp		
	210					215					220						
Pro	Lys	Arg	Gln	Ile	Arg	Ile	Phe	Asp	Asn	Asn	Asn	Asn	Asn	Ser	Ser		
225					230					235							
Ile	Met	Val	Lys	Gly	Met	Gln	Glu	Ile	Phe	Ile	Asn	Ser	Ala	His	Glu		
				245					250					255			
Gly	Leu	Asn	Leu	Leu	Met	Gln	Gly	Ser	Leu	Lys	Arg	Lys	Val	Ala	Ala		
		260						265					270				
Thr	Lys	Cys	Asn	Asp	Leu	Ser	Ser	Arg	Ser	His	Thr	Val	Phe	Thr	Ile		
		275					280					285					
Thr	Thr	Asn	Ile	Val	Glu	Gln	Asp	Ser	Lys	Asp	His	Gly	Gln	Asn	Lys		
	290					295					300						
Asn	Phe	Val	Lys	Ile	Gly	Lys	Leu	Asn	Leu	Val	Asp	Leu	Ala	Gly	Ser		
305					310					315					320		
Glu	Asn	Ile	Asn	Arg	Ser	Gly	Ala	Glu	Asn	Lys	Arg	Ala	Gln	Glu	Ala		
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Gly	Leu	Ile	Asn	Lys	Ser	Leu	Leu	Thr	Leu	Gly	Arg	Val	Ile	Asn	Ala		
		340						345					350				
Leu	Val	Asp	His	Ser	Asn	His	Ile	Pro	Tyr	Arg	Glu	Ser	Lys	Leu	Thr		
		355				360						365					
Arg	Leu	Leu	Gln	Asp	Ser	Leu	Gly	Gly	Met	Thr	Lys	Thr	Cys	Ile	Ile		
	370					375					380						
Ala	Thr	Ile	Ser	Pro	Ala	Lys	Ile	Ser	Met	Glu	Glu	Thr	Ala	Ser	Thr		
385					390					395					400		
Leu	Glu	Tyr	Ala	Thr	Arg	Ala	Lys	Ser	Ile	Lys	Asn	Thr	Pro	Gln	Val		
				405					410					415			
Asn	Gln	Ser	Leu	Ser	Lys	Asp	Thr	Cys	Leu	Lys	Asp	Tyr	Ile	Gln	Glu		
		420						425					430				
Ile	Glu	Lys	Leu	Arg	Asn	Asp	Leu	Lys	Asn	Ser	Arg	Asn	Lys	Gln	Gly		
		435					440					445					
Ile	Phe	Ile	Thr	Gln	Asp	Gln	Leu	Asp	Leu	Tyr	Glu	Ser	Asn	Ser	Ile		
	450					455					460						
Leu	Ile	Asp	Glu	Gln	Asn	Leu	Lys	Ile	His	Asn	Leu	Arg	Glu	Gln	Ile		
465					470					475					480		



Lys	Lys	Phe	Lys	Glu	Asn	Tyr	Leu	Asn	Gln	Leu	Asp	Ile	Asn	Asn	Leu
				485					490					495	
Leu	Gln	Ser	Glu	Lys	Glu	Lys	Leu	Ile	Ala	Ile	Ile	Gln	Asn	Phe	Asn
			500					505					510		
Val	Asp	Phe	Ser	Asn	Phe	Tyr	Ser	Glu	Ile	Gln	Lys	Ile	His	His	Thr
		515					520					525			
Asn	Leu	Glu	Leu	Met	Asn	Glu	Val	Ile	Gln	Gln	Arg	Asp	Phe	Ser	Leu
	530					535					540				
Glu	Asn	Ser	Gln	Lys	Gln	Tyr	Asn	Thr	Asn	Gln	Asn	Met	Gln	Leu	Lys
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Ile	Ser	Gln	Gln	Val	Leu	Gln	Thr	Leu	Asn	Thr	Leu	Gln	Gly	Ser	Leu
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Asn	Asn	Tyr	Asn	Ser	Lys	Cys	Ser	Glu	Val	Ile	Lys	Gly	Val	Thr	Glu
			580					585					590		
Glu	Leu	Thr	Arg	Asn	Val	Asn	Thr	His	Lys	Ala	Lys	His	Asp	Ser	Thr
		595					600					605			
Leu	Lys	Ser	Leu	Leu	Asn	Ile	Thr	Thr	Asn	Leu	Leu	Met	Asn	Gln	Met
	610					615					620				
Asn	Glu	Leu	Val	Arg	Ser	Ile	Ser	Thr	Ser	Leu	Glu	Ile	Phe	Gln	Ser
625					630					635					640
Asp	Ser	Thr	Ser	His	Tyr	Arg	Lys	Asp	Leu	Asn	Glu	Ile	Tyr	Gln	Ser
				645					650					655	
His	Gln	Gln	Phe	Leu	Lys	Asn	Leu	Gln	Asn	Asp	Ile	Lys	Ser	Cys	Leu
			660					665					670		
Asp	Ser	Ile	Gly	Ser	Ser	Ile	Leu	Thr	Ser	Ile	Asn	Glu	Ile	Ser	Gln
		675					680					685			
Asn	Cys	Thr	Thr	Asn	Leu	Asn	Ser	Met	Asn	Val	Leu	Ile	Glu	Asn	Gln
	690					695					700				
Gln	Ser	Gly	Ser	Ser	Lys	Leu	Ile	Lys	Glu	Gln	Asp	Leu	Glu	Ile	Lys
705					710					715					720
Lys	Leu	Lys	Asn	Asp	Leu	Ile	Asn	Glu	Arg	Arg	Ile	Ser	Asn	Gln	Phe
				725					730					735	
Asn	Gln	Gln	Leu	Ala	Glu	Met	Lys	Arg	Tyr	Phe	Gln	Asp	His	Val	Ser
			740					745					750		
Arg	Thr	Arg	Ser	Glu	Phe	His	Asp	Glu	Leu	Asn	Lys	Cys	Ile	Asp	Asn
		755					760					765			
Leu	Lys	Asp	Lys	Gln	Ser	Lys	Leu	Asp	Gln	Asp	Ile	Trp	Gln	Lys	Thr
	770					775					780				
Ala	Ser	Ile	Phe	Asn	Glu	Thr	Asp	Ile	Val	Val	Asn	Lys	Ile	His	Ser
785					790					795					800
Asp	Ser	Ile	Ala	Ser	Leu	Ala	His	Asn	Ala	Glu	Asn	Thr	Leu	Lys	Thr
				805					810					815	
Val	Ser	Gln	Asn	Asn	Glu	Ser	Phe	Thr	Asn	Asp	Leu	Ile	Ser	Leu	Ser
			820					825					830		
Arg	Gly	Met	Asn	Met	Asp	Ile	Ser	Ser	Lys	Leu	Arg	Ser	Leu	Pro	Ile
		835					840					845			
Asn	Glu	Phe	Leu	Asn	Lys	Ile	Ser	Gln	Thr	Ile	Cys	Glu	Thr	Cys	Gly
	850					855					860				
Asp	Asp	Asn	Thr	Ile	Ala	Ser	Asn	Pro	Val	Leu	Thr	Ser	Ile	Lys	Lys
865					870					875					880
Phe	Gln	Asn	Ile	Ile	Cys	Ser	Asp	Ile	Ala	Leu	Thr	Asn	Glu	Lys	Ile
				885					890					895	
Met	Ser	Leu	Ile	Asp	Glu	Ile	Gln	Ser	Gln	Ile	Glu	Thr	Ile	Ser	Asn
			900					905					910		
Glu	Asn	Asn	Ile	Asn	Leu	Ile	Ala	Ile	Asn	Glu	Asn	Phe	Asn	Ser	Leu
		915					920					925			
Cys	Asn	Phe	Ile	Leu	Thr	Asp	Tyr	Asp	Glu	Asn	Ile	Met	Gln	Ile	Ser
	930					935					940				
Lys	Thr	Gln	Asp	Glu	Val	Leu	Ser	Glu	His	Cys	Glu	Lys	Leu	Gln	Ser
945					950					955					960
Leu	Lys	Ile	Leu	Gly	Met	Asp	Ile	Phe	Thr	Ala	His	Ser	Ile	Glu	Lys
				965					970					975	
Pro	Leu	His	Glu	His	Thr	Arg	Pro	Glu	Ala	Ser	Val	Ile	Lys	Ala	Leu



Val	Ile	Gly	Leu	Thr	Glu	Arg	Arg	Cys	Glu	Ser	Ser	Glu	Glu	Leu	Leu
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Arg	Trp	Ile	Ala	Val	Gly	Asp	Lys	Ser	Arg	Lys	Ile	Gly	Glu	Thr	Asp
				325					330						335
Tyr	Asn	Ala	Arg	Ser	Ser	Arg	Ser	His	Ala	Ile	Val	Leu	Ile	Arg	Leu
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Thr	Ser	Thr	Asn	Val	Lys	Asn	Gly	Thr	Ser	Arg	Ser	Ser	Thr	Leu	Ser
		355					360						365		
Leu	Cys	Asp	Leu	Ala	Gly	Ser	Glu	Arg	Ala	Thr	Gly	Gln	Gln	Glu	Arg
	370					375					380				
Arg	Lys	Glu	Gly	Ser	Phe	Ile	Asn	Lys	Ser	Leu	Leu	Ala	Leu	Gly	Thr
385					390					395					400
Val	Ile	Ser	Lys	Leu	Ser	Ala	Asp	Lys	Met	Asn	Ser	Val	Gly	Ser	Asn
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Ile	Pro	Ser	Pro	Ser	Ala	Ser	Gly	Ser	Ser	Ser	Ser	Ser	Gly	Asn	Ala
			420					425						430	
Thr	Asn	Asn	Gly	Thr	Ser	Pro	Ser	Asn	His	Ile	Pro	Tyr	Arg	Asp	Ser
		435					440					445			
Lys	Leu	Thr	Arg	Leu	Leu	Gln	Pro	Ala	Leu	Ser	Gly	Asp	Ser	Ile	Val
	450					455					460				
Thr	Thr	Ile	Cys	Thr	Val	Asp	Thr	Arg	Asn	Asp	Ala	Ala	Ala	Glu	Thr
465					470					475					480
Met	Asn	Thr	Leu	Arg	Phe	Ala	Ser	Arg	Ala	Lys	Asn	Val	Ala	Leu	His
				485					490						495
Val	Ser	Lys	Lys	Ser	Ile	Ile	Ser	Asn	Gly	Asn	Asn	Asp	Gly	Asp	Lys
			500					505					510		
Asp	Arg	Thr	Ile	Glu	Leu	Leu	Arg	Arg	Gln	Leu	Glu	Glu	Gln	Arg	Arg
		515					520					525			
Met	Ile	Ser	Glu	Leu	Lys	Asn	Arg	Ser	Asn	Ile	Gly	Glu	Pro	Leu	Thr
	530					535					540				
Lys	Ser	Ser	Asn	Glu	Ser	Thr	Tyr	Lys	Asp	Ile	Lys	Ala	Thr	Gly	Asn
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Asp	Gly	Asp	Pro	Asn	Leu	Ala	Leu	Met	Arg	Ala	Glu	Asn	Arg	Val	Leu
				565					570						575
Lys	Tyr	Lys	Leu	Glu	Asn	Cys	Glu	Lys	Leu	Leu	Asp	Lys	Asp	Val	Val
			580					585					590		
Asp	Leu	Gln	Asp	Ser	Glu	Ile	Met	Glu	Ile	Val	Glu	Met	Leu	Pro	Phe
		595					600					605			
Glu	Val	Gly	Thr	Leu	Leu	Glu	Thr	Lys	Phe	Gln	Gly	Leu	Glu	Ser	Gln
	610					615					620				
Ile	Arg	Gln	Tyr	Arg	Lys	Tyr	Thr	Gln	Lys	Leu	Glu	Asp	Lys	Ile	Met
625					630					635					640
Ala	Leu	Glu	Lys	Ser	Gly	His	Thr	Ala	Met	Ser	Leu	Thr	Gly	Cys	Asp
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Gly	Thr	Glu	Val	Ile	Glu	Leu	Gln	Lys	Met	Leu	Glu	Arg	Lys	Asp	Lys
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Met	Ile	Glu	Ala	Leu	Gln	Ser	Ala	Lys	Arg	Leu	Arg	Asp	Arg	Ala	Leu
		675					680					685			
Lys	Pro	Leu	Ile	Asn	Thr	Gln	Gln	Ser	Pro	His	Pro	Val	Val	Asp	Asn
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Asp	Lys														
705															

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 <211> 540  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 30  
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 Gln Gln Gly Leu Glu Ala Leu Arg Glu Glu His Ser Thr Ile Ser Asn

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Pro	Lys	Gln	Lys	Leu	Ser	Gln	Ile	Asn	Asp	Asn	Leu	Asp	Lys	Leu	Val	
	50					55					60					
Cys	Gly	Val	Asp	Glu	Thr	Ser	Leu	Met	Leu	Met	Val	Phe	Gln	Leu	Thr	
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Gln	Gly	Met	Asp	Ala	Gln	His	Gln	Lys	Tyr	Gln	Ala	Gln	Arg	Arg	Arg	
				85					90					95		
Leu	Cys	Gln	Glu	Asn	Ala	Trp	Leu	Arg	Asp	Glu	Leu	Ser	Ser	Thr	Gln	
			100					105					110			
Ile	Lys	Leu	Gln	Gln	Ser	Glu	Gln	Met	Val	Ala	Gln	Leu	Glu	Glu	Glu	
	115						120					125				
Asn	Lys	His	Leu	Lys	Tyr	Met	Ala	Ser	Ile	Lys	Gln	Leu	Asp	Asp	Gly	
	130					135					140					
Thr	Gln	Ser	Asp	Thr	Lys	Thr	Ser	Val	Asp	Val	Gly	Pro	Gln	Pro	Val	
145					150					155					160	
Thr	Asn	Glu	Thr	Leu	Gln	Glu	Leu	Gly	Phe	Gly	Pro	Glu	Asp	Glu	Glu	
			165						170					175		
Asp	Met	Asn	Ala	Ser	Gln	Phe	Asn	Gln	Pro	Thr	Pro	Ala	Asn	Gln	Met	
			180					185					190			
Ala	Ala	Ser	Ala	Asn	Val	Gly	Tyr	Glu	Ile	Pro	Ala	Arg	Leu	Arg	Thr	
		195					200					205				
Leu	His	Asn	Leu	Val	Ile	Gln	Tyr	Ala	Ser	Gln	Gly	Arg	Tyr	Glu	Val	
	210					215					220					
Ala	Val	Pro	Leu	Cys	Lys	Gln	Ala	Leu	Glu	Asp	Leu	Glu	Lys	Thr	Ser	
225					230					235					240	
Gly	His	Asp	His	Pro	Asp	Val	Ala	Thr	Met	Leu	Asn	Ile	Leu	Ala	Leu	
			245						250					255		
Val	Tyr	Arg	Asp	Gln	Asn	Lys	Tyr	Lys	Glu	Ala	Ala	Asn	Leu	Leu	Asn	
			260					265					270			
Glu	Ala	Leu	Ser	Ile	Arg	Glu	Lys	Cys	Leu	Gly	Glu	Ser	His	Pro	Ala	
	275						280					285				
Val	Ala	Ala	Thr	Leu	Asn	Asn	Leu	Ala	Val	Leu	Phe	Gly	Lys	Arg	Gly	
	290					295					300					
Lys	Phe	Lys	Asp	Ala	Glu	Pro	Leu	Cys	Lys	Arg	Ala	Leu	Glu	Ile	Arg	
305					310					315					320	
Glu	Lys	Val	Leu	Gly	Asp	Asp	His	Pro	Asp	Val	Ala	Lys	Gln	Leu	Asn	
				325					330					335		
Asn	Leu	Ala	Leu	Cys	Gln	Asn	Gln	Gly	Lys	Tyr	Glu	Glu	Val	Glu		
			340				345					350				
Lys	Tyr	Tyr	Lys	Arg	Ala	Leu	Glu	Ile	Tyr	Glu	Ser	Lys	Leu	Gly	Pro	
		355					360					365				
Asp	Asp	Pro	Asn	Val	Ala	Lys	Thr	Lys	Asn	Asn	Leu	Ser	Ser	Ala	Tyr	
	370					375					380					
Leu	Lys	Gln	Gly	Lys	Tyr	Lys	Glu	Ala	Glu	Glu	Leu	Tyr	Lys	Gln	Ile	
385					390					395					400	
Leu	Thr	Arg	Ala	His	Glu	Arg	Glu	Phe	Gly	Gln	Ile	Ser	Gly	Glu	Asn	
				405					410					415		
Lys	Pro	Ile	Trp	Gln	Ile	Ala	Glu	Glu	Arg	Glu	Glu	Asn	Lys	His	Lys	
			420					425					430			
Gly	Glu	Gly	Ala	Thr	Ala	Asn	Glu	Gln	Ala	Gly	Trp	Ala	Lys	Ala	Ala	
		435					440					445				
Lys	Val	Asp	Ser	Pro	Thr	Val	Thr	Thr	Thr	Leu	Lys	Asn	Leu	Gly	Ala	
	450					455					460					
Leu	Tyr	Arg	Arg	Gln	Gly	Lys	Tyr	Glu	Ala	Ala	Glu	Thr	Leu	Glu	Asp	
465					470					475					480	
Val	Ala	Leu	Arg	Ala	Lys	Lys	Gln	His	Glu	Pro	Leu	Arg	Ser	Gly	Ala	
				485					490					495		
Met	Gly	Gly	Ile	Asp	Glu	Met	Ser	Gln	Ser	Met	Met	Ala	Ser	Thr	Ile	
			500					505					510			
Gly	Gly	Ser	Arg	Asn	Ser	Met	Thr	Thr	Ser	Thr	Ser	Gln	Thr	Gly	Leu	
		515					520					525				

Lys Asn Lys Leu Met Asn Ala Leu Gly Phe Asn Ser  
530 535 540

<210> 31  
<211> 508  
<212> PRT  
<213> Drosophila melanogaster

<400> 31  
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Leu Gln Gly Leu Glu Ala Leu Arg Val Glu His Val Ser Ile Met Asn  
20 25 30  
Gly Ile Ala Glu Val Gln Lys Asp Asn Glu Lys Ser Asp Met Leu Arg  
35 40 45  
Lys Asn Ile Glu Asn Ile Glu Leu Gly Leu Ser Glu Ala Gln Val Met  
50 55 60  
Met Ala Leu Thr Ser His Leu Gln Asn Ile Glu Ala Glu Lys His Lys  
65 70 75 80  
Leu Lys Thr Gln Val Arg Arg Leu His Gln Glu Asn Ala Trp Leu Arg  
85 90 95  
Asp Glu Leu Ala Asn Thr Gln Gln Lys Phe Gln Ala Ser Glu Gln Leu  
100 105 110  
Val Ala Gln Leu Glu Glu Glu Lys Lys His Leu Glu Phe Met Ala Ser  
115 120 125  
Val Lys Lys Tyr Asp Glu Asn Gln Glu Gln Asp Asp Ala Cys Asp Lys  
130 135 140  
Ser Arg Thr Asp Pro Val Val Glu Leu Phe Pro Asp Glu Glu Asn Glu  
145 150 155 160  
Asp Arg His Asn Met Ser Pro Thr Pro Pro Ser Gln Phe Ala Asn Gln  
165 170 175  
Thr Ser Gly Tyr Glu Ile Pro Ala Arg Leu Arg Thr Leu His Asn Leu  
180 185 190  
Val Ile Gln Tyr Ala Ser Gln Gly Arg Tyr Glu Val Ala Val Pro Leu  
195 200 205  
Cys Lys Gln Ala Leu Glu Asp Leu Glu Arg Thr Ser Gly His Asp His  
210 215 220  
Pro Asp Val Ala Thr Met Leu Asn Ile Leu Ala Leu Val Tyr Arg Asp  
225 230 235 240  
Gln Asn Lys Tyr Lys Glu Ala Ala Asn Leu Leu Asn Asp Ala Leu Ser  
245 250 255  
Ile Arg Gly Lys Thr Leu Gly Glu Asn His Pro Ala Val Ala Ala Thr  
260 265 270  
Leu Asn Asn Leu Ala Val Leu Tyr Gly Lys Arg Gly Lys Tyr Lys Asp  
275 280 285  
Ala Glu Pro Leu Cys Lys Arg Ala Leu Glu Ile Arg Glu Lys Val Leu  
290 295 300  
Gly Lys Asp His Pro Asp Val Ala Lys Gln Leu Asn Asn Leu Ala Leu  
305 310 315 320  
Leu Cys Gln Asn Gln Gly Lys Tyr Asp Glu Val Glu Lys Tyr Tyr Gln  
325 330 335  
Arg Ala Leu Asp Ile Tyr Glu Ser Lys Leu Gly Pro Asp Asp Pro Asn  
340 345 350  
Val Ala Lys Thr Lys Asn Asn Leu Ala Gly Cys Tyr Leu Lys Gln Gly  
355 360 365  
Arg Tyr Thr Glu Ala Glu Ile Leu Tyr Lys Gln Val Leu Thr Arg Ala  
370 375 380  
His Glu Arg Glu Phe Gly Ala Ile Asp Ser Lys Asn Lys Pro Ile Trp  
385 390 395 400  
Gln Val Ala Glu Glu Arg Glu Glu His Lys Phe Asp Asn Arg Glu Asn  
405 410 415  
Thr Pro Tyr Gly Glu Tyr Gly Gly Trp His Lys Ala Ala Lys Val Asp

Ser	Pro	Thr	420	Thr	Thr	Thr	Leu	425	Lys	Asn	Leu	Gly	Ala	430	Leu	Tyr	Arg
			435				440						445				
Arg	Gln	Gly	Met	Phe	Glu	Ala	Ala	Glu	Thr	Leu	Glu	Asp	Cys	Ala	Met		
	450					455					460						
Arg	Ser	Lys	Lys	Glu	Ala	Tyr	Asp	Leu	Ala	Lys	Gln	Thr	Lys	Leu	Ser		
465				470					475						480		
Gln	Leu	Leu	Thr	Ser	Asn	Glu	Lys	Arg	Arg	Ser	Lys	Ala	Ile	Lys	Glu		
			485					490						495			
Asp	Leu	Asp	Phe	Ser	Glu	Glu	Lys	Asn	Ala	Lys	Pro						
			500					505									

<210> 32  
 <211> 571  
 <212> PRT  
 <213> Loligo pealeii

<400> 32

Met	Glu	Val	Thr	Gln	Thr	Val	Lys	Ser	Tyr	Arg	Ile	Lys	Lys	Ile	Glu		
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Glu	Ile	Gly	Lys	Met	Thr	Ala	Leu	Ser	Gln	Glu	Glu	Ile	Ile	Ser	Asn		
			20					25					30				
Thr	Lys	Thr	Val	Ile	Gln	Gly	Leu	Asp	Thr	Leu	Lys	Asn	Glu	His	Asn		
		35				40						45					
Gln	Ile	Leu	Asn	Ser	Leu	Leu	Thr	Ser	Met	Lys	Thr	Ile	Arg	Lys	Glu		
	50				55					60							
Asn	Gly	Asp	Thr	Asn	Leu	Val	Glu	Glu	Lys	Ala	Asn	Ile	Leu	Lys	Lys		
65				70					75						80		
Ser	Val	Asp	Ser	Ile	Glu	Leu	Gly	Leu	Gly	Glu	Ala	Gln	Val	Met	Met		
			85					90					95				
Ala	Leu	Ala	Asn	His	Leu	Gln	His	Thr	Glu	Ala	Glu	Lys	Gln	Lys	Leu		
			100					105					110				
Arg	Ala	Gln	Val	Arg	Arg	Leu	Cys	Gln	Glu	Asn	Ala	Trp	Leu	Arg	Asp		
		115					120					125					
Glu	Leu	Ala	Asn	Thr	Gln	Gln	Lys	Leu	Gln	Met	Ser	Glu	Gln	Lys	Val		
	130					135				140							
Ala	Thr	Ile	Glu	Glu	Glu	Lys	Lys	His	Leu	Glu	Phe	Met	Asn	Glu	Met		
145				150					155						160		
Lys	Lys	Tyr	Asp	Thr	Asn	Glu	Ala	Gln	Val	Asn	Glu	Glu	Lys	Glu	Ser		
			165					170						175			
Glu	Gln	Ser	Ser	Leu	Asp	Leu	Gly	Phe	Pro	Asp	Asp	Asp	Asp	Asp	Gly		
		180					185					190					
Gly	Gln	Pro	Glu	Val	Leu	Ser	Pro	Thr	Gln	Pro	Ser	Ala	Met	Ala	Gln		
	195					200						205					
Ala	Ala	Ser	Gly	Gly	Cys	Glu	Ile	Pro	Ala	Arg	Leu	Arg	Thr	Leu	His		
	210				215						220						
Asn	Leu	Val	Ile	Gln	Tyr	Ala	Ser	Gln	Gly	Arg	Tyr	Glu	Val	Ala	Val		
225				230					235						240		
Pro	Leu	Cys	Lys	Gln	Ala	Leu	Glu	Asp	Leu	Glu	Lys	Thr	Ser	Gly	His		
			245					250						255			
Asp	His	Pro	Asp	Val	Ala	Thr	Met	Leu	Asn	Ile	Leu	Ala	Leu	Val	Tyr		
		260					265						270				
Arg	Asp	Gln	Gly	Lys	Tyr	Lys	Glu	Ala	Ala	Asn	Leu	Leu	Asn	Asp	Ala		
		275					280					285					
Leu	Gly	Ile	Arg	Glu	Lys	Thr	Leu	Gly	Pro	Asp	His	Pro	Ala	Val	Ala		
	290				295						300						
Ala	Thr	Leu	Asn	Asn	Leu	Ala	Val	Leu	Tyr	Gly	Lys	Arg	Gly	Lys	Tyr		
305				310					315						320		
Lys	Asp	Ala	Glu	Pro	Leu	Cys	Lys	Arg	Ala	Leu	Val	Ile	Arg	Glu	Lys		
			325					330						335			
Val	Leu	Gly	Lys	Asp	His	Pro	Asp	Val	Ala	Lys	Gln	Leu	Asn	Asn	Leu		
			340				345						350				

Ala	Leu	Leu	Cys	Gln	Asn	Gln	Gly	Lys	Tyr	Glu	Glu	Val	Glu	Arg	Tyr	
		355					360					365				
Tyr	Gln	Arg	Ala	Leu	Glu	Ile	Tyr	Gln	Lys	Glu	Leu	Gly	Pro	Asp	Asp	
	370					375					380					
Pro	Asn	Val	Ala	Lys	Thr	Lys	Asn	Asn	Leu	Ala	Ser	Ala	Tyr	Leu	Lys	
	385				390					395					400	
Gln	Gly	Lys	Tyr	Lys	Gln	Ala	Glu	Ile	Leu	Tyr	Lys	Glu	Val	Leu	Thr	
				405				410						415		
Arg	Ala	His	Glu	Lys	Glu	Phe	Gly	Lys	Val	Asp	Asp	Asp	Asn	Lys	Pro	
			420				425						430			
Ile	Trp	Met	Gln	Ala	Glu	Glu	Arg	Glu	Glu	Asn	Lys	Ala	Lys	Tyr	Lys	
	435						440					445				
Asp	Gly	Ala	Pro	Gln	Pro	Asp	Tyr	Gly	Ser	Trp	Leu	Lys	Ala	Val	Lys	
	450					455					460					
Val	Asp	Ser	Pro	Thr	Val	Thr	Thr	Thr	Leu	Lys	Asn	Leu	Gly	Ala	Leu	
	465				470					475					480	
Tyr	Arg	Arg	Gln	Gly	Lys	Tyr	Glu	Ala	Ala	Glu	Thr	Leu	Glu	Glu	Cys	
			485					490						495		
Ala	Leu	Arg	Ser	Arg	Lys	Ser	Ala	Leu	Glu	Val	Val	Arg	Gln	Thr	Lys	
			500					505					510			
Ile	Ser	Asp	Val	Leu	Gly	Ser	Asp	Phe	Ser	Lys	Gly	Gln	Ser	Pro	Lys	
		515					520					525				
Asp	Arg	Lys	Arg	Ser	Asn	Ser	Arg	Asp	Arg	Asn	Arg	Arg	Asp	Ser	Met	
	530				535					540						
Asp	Ser	Val	Ser	Tyr	Glu	Lys	Ser	Gly	Asp	Gly	Asp	Glu	His	Glu	Lys	
	545				550					555					560	
Ser	Lys	Leu	His	Val	Gly	Thr	Ser	His	Lys	Gln						
			565						570							

<210> 33  
 <211> 686  
 <212> PRT  
 <213> Strongylocentrotus purpuratus

<400> 33

Met	Ser	Gly	Ser	Lys	Leu	Ser	Thr	Pro	Asn	Asn	Ser	Gly	Gly	Gly	Gln	
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Gly	Asn	Leu	Ser	Gln	Glu	Gln	Ile	Ile	Thr	Gly	Thr	Arg	Glu	Val	Ile	
		20					25						30			
Lys	Gly	Leu	Glu	Gln	Leu	Lys	Asn	Glu	His	Asn	Asp	Ile	Leu	Asn	Ser	
	35					40						45				
Leu	Tyr	Gln	Ser	Leu	Lys	Met	Leu	Lys	Lys	Asp	Thr	Pro	Gly	Asp	Ser	
	50					55				60						
Asn	Leu	Val	Glu	Glu	Lys	Thr	Asp	Ile	Ile	Glu	Lys	Ser	Leu	Glu	Ser	
	65				70					75				80		
Leu	Glu	Leu	Gly	Leu	Gly	Glu	Ala	Lys	Val	Met	Met	Ala	Leu	Gly	His	
			85					90					95			
His	Leu	Asn	Met	Val	Glu	Ala	Glu	Lys	Gln	Lys	Leu	Arg	Ala	Gln	Val	
		100					105						110			
Arg	Arg	Leu	Val	Gln	Glu	Asn	Thr	Trp	Leu	Arg	Asp	Glu	Leu	Ala	Ala	
	115						120					125				
Thr	Gln	Gln	Lys	Leu	Gln	Thr	Ser	Glu	Gln	Asn	Leu	Ala	Asp	Leu	Glu	
	130					135					140					
Val	Lys	Tyr	Lys	His	Leu	Glu	Tyr	Met	Asn	Ser	Ile	Lys	Lys	Tyr	Asp	
	145				150					155					160	
Glu	Asp	Arg	Thr	Pro	Asp	Glu	Glu	Ala	Ser	Ser	Ser	Asp	Pro	Leu	Asp	
				165					170					175		
Leu	Gly	Phe	Pro	Glu	Asp	Asp	Asp	Gly	Gly	Gln	Ala	Asp	Glu	Ser	Tyr	
			180					185					190			
Pro	Gln	Pro	Gln	Thr	Gly	Ser	Gly	Ser	Val	Ser	Ala	Ala	Ala	Gly	Gly	
	195						200					205				
Tyr	Glu	Ile	Pro	Ala	Arg	Leu	Arg	Thr	Leu	His	Asn	Leu	Val	Ile	Gln	

210		215		220											
Tyr	Ala	Ser	Gln	Ser	Arg	Tyr	Glu	Val	Ala	Val	Pro	Leu	Cys	Lys	Gln
225					230					235					240
Ala	Leu	Glu	Asp	Leu	Glu	Lys	Thr	Ser	Gly	His	Asp	His	Pro	Asp	Val
				245					250						255
Ala	Thr	Met	Leu	Asn	Ile	Leu	Ala	Leu	Val	Tyr	Arg	Asp	Gln	Asn	Lys
			260					265					270		
Tyr	Lys	Glu	Ala	Gly	Asn	Leu	Leu	His	Asp	Ala	Leu	Ala	Ile	Arg	Glu
		275					280					285			
Lys	Thr	Leu	Gly	Pro	Asp	His	Pro	Ala	Val	Ala	Ala	Thr	Leu	Asn	Asn
	290					295				300					
Leu	Ala	Val	Leu	Tyr	Gly	Lys	Arg	Gly	Lys	Tyr	Lys	Glu	Ala	Glu	Pro
305					310					315					320
Leu	Cys	Lys	Arg	Ala	Leu	Glu	Ile	Arg	Glu	Lys	Val	Leu	Gly	Lys	Asp
				325					330					335	
His	Pro	Asp	Val	Ala	Lys	Gln	Leu	Asn	Asn	Leu	Ala	Leu	Leu	Cys	Gln
			340					345					350		
Asn	Gln	Gly	Lys	Tyr	Glu	Glu	Val	Glu	Trp	Tyr	Tyr	Gln	Arg	Ala	Leu
		355					360					365			
Glu	Ile	Tyr	Glu	Lys	Lys	Leu	Gly	Pro	Asp	Asp	Pro	Asn	Val	Ala	Lys
	370					375					380				
Thr	Lys	Asn	Asn	Leu	Ala	Ala	Tyr	Leu	Lys	Gln	Gly	Lys	Tyr	Lys	
385					390				395						400
Ala	Ala	Glu	Thr	Leu	Tyr	Lys	Gln	Val	Leu	Thr	Arg	Ala	His	Glu	Arg
			405					410						415	
Glu	Phe	Gly	Leu	Ser	Ala	Asp	Asp	Lys	Asp	Asn	Lys	Pro	Ile	Trp	Met
		420					425						430		
Gln	Ala	Glu	Glu	Arg	Glu	Glu	Lys	Gly	Lys	Phe	Lys	Asp	Asn	Ala	Pro
		435					440					445			
Tyr	Gly	Asp	Tyr	Gly	Gly	Trp	His	Lys	Ala	Ala	Lys	Val	Asp	Ser	Arg
	450					455					460				
Ser	Arg	Ser	Ser	Pro	Thr	Val	Thr	Thr	Thr	Leu	Lys	Asn	Leu	Gly	Ala
465					470					475					480
Leu	Tyr	Arg	Arg	Gln	Gly	Lys	Tyr	Asp	Ala	Ala	Glu	Ile	Leu	Glu	Glu
				485					490					495	
Cys	Ala	Met	Lys	Ser	Arg	Arg	Asn	Ala	Leu	Asp	Met	Val	Arg	Glu	Thr
		500						505					510		
Lys	Val	Arg	Glu	Leu	Leu	Gly	Gln	Asp	Leu	Ser	Thr	Asp	Val	Pro	Arg
		515					520					525			
Ser	Glu	Ala	Met	Ala	Lys	Glu	Arg	His	His	Arg	Arg	Ser	Ser	Gly	Thr
	530					535					540				
Pro	Arg	His	Gly	Ser	Thr	Glu	Ser	Val	Ser	Tyr	Glu	Lys	Thr	Asp	Gly
545					550					555					560
Ser	Glu	Glu	Val	Ser	Ile	Gly	Val	Ala	Trp	Lys	Ala	Lys	Arg	Lys	Ala
			565					570						575	
Lys	Asp	Arg	Ser	Arg	Ser	Ile	Pro	Ala	Gly	Tyr	Val	Glu	Ile	Pro	Arg
		580						585					590		
Ser	Pro	Pro	His	Val	Leu	Val	Glu	Asn	Gly	Asp	Gly	Lys	Leu	Arg	Arg
		595					600					605			
Ser	Gly	Ser	Leu	Ser	Lys	Leu	Arg	Ala	Ser	Val	Arg	Arg	Ser	Ser	Thr
	610					615					620				
Lys	Leu	Leu	Asn	Lys	Leu	Lys	Gly	Arg	Glu	Ser	Asp	Asp	Asp	Gly	Gly
625					630					635					640
Met	Lys	Arg	Ala	Ser	Ser	Met	Ser	Val	Leu	Pro	Ser	Arg	Gly	Asn	Asp
			645					650						655	
Glu	Ser	Thr	Pro	Ala	Pro	Ile	Gln	Leu	Ser	Gln	Arg	Gly	Arg	Val	Gly
		660					665						670		
Ser	His	Asp	Asn	Leu	Ser	Ser	Arg	Arg	Gln	Ser	Gly	Asn	Phe		
		675					680					685			

<210> 34  
<211> 452



<212> PRT  
 <213> Gallus gallus

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<400> 34
Met Arg Arg Ala Leu Gly Thr Leu Gly Cys Cys Leu Ala Leu Leu Leu
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Pro Leu Leu Pro Ala Ala Arg Gly Val Pro His Arg His Arg Arg Gln
 20          25          30
Pro Leu Gly Ser Gly Leu Gly Arg His Gly Ala Ala Asp Thr Ala Cys
 35          40          45
Lys Asn Arg Pro Leu Asp Leu Val Phe Ile Ile Asp Ser Ser Arg Ser
 50          55          60
Val Arg Pro Glu Glu Phe Glu Lys Val Lys Ile Phe Leu Ser Lys Met
 65          70          75
Ile Asp Thr Leu Asp Val Gly Glu Arg Thr Thr Arg Val Ala Val Met
 85          90          95
Asn Tyr Ala Ser Thr Val Lys Val Glu Phe Pro Leu Arg Thr Tyr Phe
100          105          110
Asp Lys Ala Ser Met Lys Glu Ala Val Ser Arg Ile Gln Pro Leu Ser
115          120          125
Ala Gly Thr Met Thr Gly Leu Ala Ile Gln Ala Ala Met Asp Glu Val
130          135          140
Phe Thr Glu Glu Met Gly Thr Arg Pro Ala Asn Phe Asn Ile Pro Lys
145          150          155
Val Val Ile Ile Val Thr Asp Gly Arg Pro Gln Asp Gln Val Glu Asn
165          170          175
Val Ala Ala Asn Ala Arg Thr Ala Gly Ile Glu Ile Tyr Ala Val Gly
180          185          190
Val Gly Arg Ala Asp Met Gln Ser Leu Arg Ile Met Ala Ser Glu Pro
195          200          205
Leu Asp Glu His Val Phe Tyr Val Glu Thr Tyr Gly Val Ile Glu Lys
210          215          220
Leu Thr Ser Lys Phe Arg Glu Thr Phe Cys Ala Ala Asn Thr Cys Ala
225          230          235
Leu Gly Thr His Asp Cys Glu Gln Val Cys Val Ser Asn Asp Gly Ser
245          250          255
Tyr Leu Cys Asp Cys Tyr Glu Gly Tyr Thr Leu Asn Pro Asp Lys Arg
260          265          270
Thr Cys Ser Ala Val Asp Val Cys Ala Pro Gly Arg His Glu Cys Asp
275          280          285
Gln Ile Cys Val Ser Asn Asn Gly Ser Tyr Val Cys Glu Cys Phe Glu
290          295          300
Gly Tyr Thr Leu Asn Pro Asp Lys Lys Thr Cys Ser Ala Met Asp Val
305          310          315
Cys Ala Pro Gly Arg His Asp Cys Ala Gln Val Cys Arg Arg Asn Gly
325          330          335
Gly Ser Tyr Ser Cys Asp Cys Phe Glu Gly Phe Thr Leu Asn Pro Asp
340          345          350
Lys Lys Thr Cys Ser Ala Val Asp Val Cys Ala Pro Gly Arg His Asp
355          360          365
Cys Glu Gln Val Cys Val Arg Asp Asp Leu Phe Tyr Thr Cys Asp Cys
370          375          380
Tyr Gln Gly Tyr Val Leu Asn Pro Asp Lys Lys Thr Cys Ser Arg Ala
385          390          395
Thr Thr Ser Ser Leu Val Thr Asp Glu Glu Ala Cys Lys Cys Glu Ala
405          410          415
Ile Ala Ala Leu Gln Asp Ser Val Thr Ser Arg Leu Glu Ala Leu Ser
420          425          430
Thr Lys Leu Asp Glu Val Ser Gln Lys Leu Gln Ala Tyr Gln Asp Arg
435          440          445
Gln Gln Val Val
450

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<210> 35  
 <211> 486  
 <212> PRT  
 <213> Homo sapiens

<400> 35  
 Met Pro Arg Pro Ala Pro Ala Arg Arg Leu Pro Gly Leu Leu Leu Leu  
 1 5 10 15  
 Leu Trp Pro Leu Leu Leu Pro Ser Ala Ala Pro Asp Pro Val Ala  
 20 25 30  
 Arg Pro Gly Phe Arg Arg Leu Glu Thr Arg Gly Pro Gly Gly Ser Pro  
 35 40 45  
 Gly Arg Arg Pro Ser Pro Ala Ala Pro Asp Gly Ala Pro Ala Ser Gly  
 50 55 60  
 Thr Ser Glu Pro Gly Arg Ala Arg Gly Ala Gly Val Cys Lys Ser Arg  
 65 70 75 80  
 Pro Leu Asp Leu Val Phe Ile Ile Asp Ser Ser Arg Ser Val Arg Pro  
 85 90 95  
 Leu Glu Phe Thr Lys Val Lys Thr Phe Val Ser Arg Ile Ile Asp Thr  
 100 105 110  
 Leu Asp Ile Gly Pro Ala Asp Thr Arg Val Ala Val Val Asn Tyr Ala  
 115 120 125  
 Ser Thr Val Lys Ile Glu Phe Gln Leu Gln Ala Tyr Thr Asp Lys Gln  
 130 135 140  
 Ser Leu Lys Gln Ala Val Gly Arg Ile Thr Pro Leu Ser Thr Gly Thr  
 145 150 155 160  
 Met Ser Gly Leu Ala Ile Gln Thr Ala Met Asp Glu Ala Phe Thr Val  
 165 170 175  
 Glu Ala Gly Ala Arg Glu Pro Ser Ser Asn Ile Pro Lys Val Ala Ile  
 180 185 190  
 Ile Val Thr Asp Gly Arg Pro Gln Asp Gln Val Asn Glu Val Ala Ala  
 195 200 205  
 Arg Ala Gln Ala Ser Gly Ile Glu Leu Tyr Ala Val Gly Val Asp Arg  
 210 215 220  
 Ala Asp Met Ala Ser Leu Lys Met Met Ala Ser Glu Pro Leu Glu Glu  
 225 230 235 240  
 His Val Phe Tyr Val Glu Thr Tyr Gly Val Ile Glu Lys Leu Ser Ser  
 245 250 255  
 Arg Phe Gln Glu Thr Phe Cys Ala Leu Asp Pro Cys Val Leu Gly Thr  
 260 265 270  
 His Gln Cys Gln His Val Cys Ile Ser Asp Gly Glu Gly Lys His His  
 275 280 285  
 Cys Glu Cys Ser Gln Gly Tyr Thr Leu Asn Ala Asp Lys Lys Thr Cys  
 290 295 300  
 Ser Ala Leu Asp Arg Cys Ala Leu Asn Thr His Gly Cys Glu His Ile  
 305 310 315 320  
 Cys Val Asn Asp Arg Ser Gly Ser Tyr His Cys Glu Cys Tyr Glu Gly  
 325 330 335  
 Tyr Thr Leu Asn Glu Asp Arg Lys Thr Cys Ser Ala Gln Asp Lys Cys  
 340 345 350  
 Ala Leu Gly Thr His Gly Cys Gln His Ile Cys Val Asn Asp Arg Thr  
 355 360 365  
 Gly Ser His His Cys Glu Cys Tyr Glu Gly Tyr Thr Leu Asn Ala Asp  
 370 375 380  
 Lys Lys Thr Cys Ser Val Arg Asp Lys Cys Ala Leu Gly Ser His Gly  
 385 390 395 400  
 Cys Gln His Ile Cys Val Ser Asp Gly Ala Ala Ser Tyr His Cys Asp  
 405 410 415  
 Cys Tyr Pro Gly Tyr Thr Leu Asn Glu Asp Lys Lys Thr Cys Ser Ala  
 420 425 430  
 Thr Glu Glu Ala Arg Arg Leu Val Ser Thr Glu Asp Ala Cys Gly Cys  
 435 440 445  
 Glu Ala Thr Leu Ala Phe Gln Asp Lys Val Ser Ser Tyr Leu Gln Arg

450		455		460
Leu Asn Thr Lys Leu Asp	Asp Ile Leu Glu Lys	Leu Lys Ile Asn Glu		
465	470	475		480
Tyr Gly Gln Ile His Arg				
	485			

<210> 36  
 <211> 481  
 <212> PRT  
 <213> Mus musculus

<400> 36

Met	Leu	Leu	Ser	Ala	Pro	Leu	Arg	His	Leu	Pro	Gly	Leu	Leu	Leu	Leu
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Leu	Trp	Pro	Leu	Leu	Leu	Leu	Pro	Ser	Leu	Ala	Ala	Pro	Gly	Arg	Leu
			20					25					30		
Ala	Arg	Ala	Ser	Val	Arg	Arg	Leu	Gly	Thr	Arg	Val	Pro	Gly	Gly	Ser
		35					40					45			
Pro	Gly	His	Leu	Ser	Ala	Leu	Ala	Thr	Ser	Thr	Arg	Ala	Pro	Tyr	Ser
	50					55					60				
Gly	Gly	Arg	Gly	Ala	Gly	Val	Cys	Lys	Ser	Arg	Pro	Leu	Asp	Leu	Val
65					70					75					80
Phe	Ile	Ile	Asp	Ser	Ser	Arg	Ser	Val	Arg	Pro	Leu	Glu	Phe	Thr	Lys
			85						90					95	
Val	Lys	Thr	Phe	Val	Ser	Arg	Ile	Ile	Asp	Thr	Leu	Asp	Ile	Gly	Ala
			100					105						110	
Thr	Asp	Thr	Arg	Val	Ala	Val	Val	Asn	Tyr	Ala	Ser	Thr	Val	Lys	Ile
		115					120					125			
Glu	Phe	Gln	Leu	Asn	Thr	Tyr	Ser	Asp	Lys	Gln	Ala	Leu	Lys	Gln	Ala
	130					135					140				
Val	Ala	Arg	Ile	Thr	Pro	Leu	Ser	Thr	Gly	Thr	Met	Ser	Gly	Leu	Ala
145					150					155					160
Ile	Gln	Thr	Ala	Met	Glu	Glu	Ala	Phe	Thr	Val	Glu	Ala	Gly	Ala	Arg
			165					170						175	
Gly	Pro	Met	Ser	Asn	Ile	Pro	Lys	Val	Ala	Ile	Ile	Val	Thr	Asp	Gly
		180					185						190		
Arg	Pro	Gln	Asp	Gln	Val	Asn	Glu	Val	Ala	Ala	Arg	Ala	Arg	Ala	Ser
	195					200						205			
Gly	Ile	Glu	Leu	Tyr	Ala	Val	Gly	Val	Asp	Arg	Ala	Asp	Met	Glu	Ser
	210					215					220				
Leu	Lys	Met	Met	Ala	Ser	Lys	Pro	Leu	Glu	Glu	His	Val	Phe	Tyr	Val
225					230					235					240
Glu	Thr	Tyr	Gly	Val	Ile	Glu	Lys	Leu	Ser	Ala	Arg	Phe	Gln	Glu	Thr
			245						250					255	
Phe	Cys	Ala	Leu	Asp	Gln	Cys	Met	Leu	Gly	Thr	His	Gln	Cys	Gln	His
		260						265					270		
Val	Cys	Val	Ser	Asp	Gly	Asp	Gly	Lys	His	His	Cys	Glu	Cys	Ser	Gln
		275					280					285			
Gly	Tyr	Thr	Leu	Asn	Ala	Asp	Gly	Lys	Thr	Cys	Ser	Ala	Ile	Asp	Lys
	290					295					300				
Cys	Ala	Leu	Ser	Thr	His	Gly	Cys	Glu	Gln	Ile	Cys	Ile	Asn	Asp	Arg
305					310					315					320
Asn	Gly	Ser	Tyr	His	Cys	Glu	Cys	Tyr	Gly	Gly	Tyr	Ala	Leu	Asn	Ala
				325					330					335	
Asp	Arg	Arg	Thr	Cys	Ala	Ala	Leu	Asp	Lys	Cys	Ala	Ser	Gly	Thr	His
			340					345					350		
Gly	Cys	Gln	His	Ile	Cys	Val	Asn	Asp	Gly	Ala	Gly	Ser	His	His	Cys
		355					360					365			
Glu	Cys	Phe	Glu	Gly	Tyr	Thr	Leu	Asn	Ala	Asp	Lys	Lys	Thr	Cys	Ser
	370					375					380				
Val	Arg	Asn	Lys	Cys	Ala	Leu	Gly	Thr	His	Gly	Cys	Gln	His	Ile	Cys
385					390					395					400

Val	Ser	Asp	Gly	Ala	Val	Ala	Tyr	His	Cys	Asp	Cys	Phe	Pro	Gly	Tyr
				405					410					415	
Thr	Leu	Asn	Asp	Asp	Lys	Lys	Thr	Cys	Ser	Asp	Ile	Glu	Glu	Ala	Arg
			420					425					430		
Ser	Leu	Ile	Ser	Ile	Glu	Asp	Ala	Cys	Gly	Cys	Gly	Ala	Thr	Leu	Ala
		435					440					445			
Phe	Gln	Glu	Lys	Val	Ser	Ser	His	Leu	Gln	Lys	Leu	Asn	Thr	Lys	Leu
	450					455					460				
Asp	Asn	Ile	Leu	Lys	Lys	Leu	Lys	Val	Thr	Glu	Tyr	Gly	Gln	Val	His
465					470					475					480
Arg															

<210> 37  
 <211> 1507  
 <212> PRT  
 <213> *Drosophila melanogaster*

<400> 37

Met	Val	Ser	Leu	Ile	Asp	Thr	Ile	Glu	Ala	Ala	Ala	Glu	Lys	Gln	Lys
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Gln	Ser	Gln	Ala	Val	Val	Thr	Asn	Thr	Ser	Ala	Ser	Ser	Ser	Ser	Cys
			20					25					30		
Ser	Ser	Ser	Phe	Ser	Ser	Ser	Pro	Pro	Ser	Ser	Ser	Val	Gly	Ser	Pro
		35					40					45			
Ser	Pro	Gly	Ala	Pro	Lys	Thr	Asn	Leu	Thr	Ala	Ser	Gly	Lys	Pro	Lys
	50					55					60				
Glu	Lys	Arg	Arg	Asn	Asn	Glu	Lys	Arg	Lys	Glu	Lys	Ser	Arg	Asp	Ala
65				70						75					80
Ala	Arg	Cys	Arg	Arg	Ser	Lys	Glu	Thr	Glu	Ile	Phe	Met	Glu	Leu	Ser
				85					90					95	
Ala	Ala	Leu	Pro	Leu	Lys	Thr	Asp	Asp	Val	Asn	Gln	Leu	Asp	Lys	Ala
			100					105					110		
Ser	Val	Met	Arg	Ile	Thr	Ile	Ala	Phe	Leu	Lys	Ile	Arg	Glu	Met	Leu
		115					120					125			
Gln	Phe	Val	Pro	Ser	Leu	Arg	Asp	Cys	Asn	Asp	Asp	Ile	Lys	Gln	Asp
	130					135					140				
Ile	Glu	Thr	Ala	Glu	Asp	Gln	Gln	Glu	Val	Lys	Pro	Lys	Leu	Glu	Val
145					150					155					160
Gly	Thr	Glu	Asp	Trp	Leu	Asn	Gly	Ala	Glu	Ala	Arg	Glu	Leu	Leu	Lys
				165				170						175	
Gln	Thr	Met	Asp	Gly	Phe	Leu	Leu	Val	Leu	Ser	His	Glu	Gly	Asp	Ile
			180					185					190		
Thr	Tyr	Val	Ser	Glu	Asn	Val	Val	Glu	Tyr	Leu	Gly	Ile	Thr	Lys	Ile
		195				200						205			
Asp	Thr	Leu	Gly	Gln	Gln	Ile	Trp	Glu	Tyr	Ser	His	Gln	Cys	Asp	His
	210					215					220				
Ala	Glu	Ile	Lys	Glu	Ala	Leu	Ser	Leu	Lys	Arg	Glu	Leu	Ala	Gln	Lys
225					230					235					240
Val	Lys	Asp	Glu	Pro	Gln	Gln	Asn	Ser	Gly	Val	Ser	Thr	His	His	Arg
				245					250					255	
Asp	Leu	Phe	Val	Arg	Leu	Lys	Cys	Thr	Leu	Thr	Ser	Arg	Gly	Arg	Ser
			260					265					270		
Ile	Asn	Ile	Lys	Ser	Ala	Ser	Tyr	Lys	Val	Ile	His	Ile	Thr	Gly	His
		275					280					285			
Leu	Val	Val	Asn	Ala	Lys	Gly	Glu	Arg	Leu	Leu	Met	Ala	Ile	Gly	Arg
	290					295					300				
Pro	Ile	Pro	His	Pro	Ser	Asn	Ile	Glu	Ile	Pro	Leu	Gly	Thr	Ser	Thr
305					310					315					320
Phe	Leu	Thr	Lys	His	Ser	Leu	Asp	Met	Arg	Phe	Thr	Tyr	Val	Asp	Asp
				325					330					335	
Lys	Met	His	Asp	Leu	Leu	Gly	Tyr	Ser	Pro	Lys	Asp	Leu	Leu	Asp	Thr

			340					345				350			
Ser	Leu	Phe	Ser	Cys	Gln	His	Gly	Ala	Asp	Ser	Glu	Arg	Leu	Met	Ala
		355					360					365			
Thr	Phe	Lys	Ser	Val	Leu	Ser	Lys	Gly	Gln	Gly	Glu	Thr	Ser	Arg	Tyr
	370					375					380				
Arg	Phe	Leu	Gly	Lys	Tyr	Gly	Gly	Tyr	Cys	Trp	Ile	Leu	Ser	Gln	Ala
385					390					395					400
Thr	Ile	Val	Tyr	Asp	Lys	Leu	Lys	Pro	Gln	Ser	Val	Val	Cys	Val	Asn
				405					410					415	
Tyr	Val	Ile	Ser	Asn	Leu	Glu	Asn	Lys	His	Glu	Ile	Tyr	Ser	Leu	Ala
			420					425					430		
Gln	Gln	Thr	Ala	Ala	Ser	Glu	Gln	Lys	Glu	Gln	His	His	Gln	Ala	Ala
		435					440					445			
Glu	Thr	Glu	Lys	Glu	Pro	Glu	Lys	Ala	Ala	Asp	Pro	Glu	Ile	Ile	Ala
	450					455					460				
Gln	Glu	Thr	Lys	Glu	Thr	Val	Asn	Thr	Pro	Ile	His	Thr	Ser	Glu	Leu
465					470					475					480
Gln	Ala	Lys	Pro	Leu	Gln	Leu	Glu	Ser	Glu	Lys	Ala	Glu	Lys	Thr	Ile
				485					490					495	
Glu	Glu	Thr	Lys	Thr	Ile	Ala	Thr	Ile	Pro	Pro	Val	Thr	Ala	Thr	Ser
			500					505					510		
Thr	Ala	Asp	Gln	Ile	Lys	Gln	Leu	Pro	Glu	Ser	Asn	Pro	Tyr	Lys	Gln
		515					520					525			
Ile	Leu	Gln	Ala	Glu	Leu	Leu	Ile	Lys	Arg	Glu	Asn	His	Ser	Pro	Gly
	530					535					540				
Pro	Arg	Thr	Ile	Thr	Ala	Gln	Leu	Leu	Ser	Gly	Ser	Ser	Ser	Gly	Leu
545					550					555					560
Arg	Pro	Glu	Glu	Lys	Arg	Pro	Lys	Ser	Val	Thr	Ala	Ser	Val	Leu	Arg
				565					570					575	
Pro	Ser	Pro	Ala	Pro	Pro	Leu	Thr	Pro	Pro	Pro	Thr	Ala	Val	Leu	Cys
			580					585					590		
Lys	Lys	Thr	Pro	Leu	Gly	Val	Glu	Pro	Asn	Leu	Pro	Pro	Thr	Thr	Thr
		595					600					605			
Ala	Thr	Ala	Ala	Ile	Ile	Ser	Ser	Ser	Asn	Gln	Gln	Leu	Gln	Ile	Ala
	610					615					620				
Gln	Gln	Thr	Gln	Leu	Gln	Asn	Pro	Gln	Gln	Pro	Ala	Gln	Asp	Met	Ser
625					630					635					640
Lys	Gly	Phe	Cys	Ser	Leu	Phe	Ala	Asp	Asp	Gly	Arg	Gly	Leu	Thr	Met
				645					650					655	
Leu	Lys	Glu	Glu	Pro	Asp	Asp	Leu	Ser	His	His	Leu	Ala	Ser	Thr	Asn
			660					665					670		
Cys	Ile	Gln	Leu	Asp	Glu	Met	Thr	Pro	Phe	Ser	Asp	Met	Leu	Val	Gly
		675					680					685			
Leu	Met	Gly	Thr	Cys	Leu	Leu	Pro	Glu	Asp	Ile	Asn	Ser	Leu	Asp	Ser
	690					695					700				
Thr	Thr	Cys	Ser	Thr	Thr	Ala	Ser	Gly	Gln	His	Tyr	Gln	Ser	Pro	Ser
705					710					715					720
Ser	Ser	Ser	Thr	Ser	Ala	Pro	Ser	Asn	Thr	Ser	Ser	Ser	Asn	Asn	Ser
				725					730					735	
Tyr	Ala	Asn	Ser	Pro	Leu	Ser	Pro	Leu	Thr	Pro	Asn	Ser	Thr	Ala	Thr
			740					745					750		
Ala	Ser	Asn	Pro	Ser	His	Gln	Gln	Gln	Gln	His	His	Asn	Gln	Gln	
		755					760					765			
Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	His	His	Pro	Gln	His	His	Asp	Asn
		770				775					780				
Ser	Asn	Ser	Ser	Ser	Asn	Ile	Asp	Pro	Leu	Phe	Asn	Tyr	Arg	Glu	Glu
785					790					795					800
Ser	Asn	Asp	Thr	Ser	Cys	Ser	Gln	His	Leu	His	Ser	Pro	Ser	Ile	Thr
				805					810					815	
Ser	Lys	Ser	Pro	Glu	Asp	Ser	Ser	Leu	Pro	Ser	Leu	Cys	Ser	Pro	Asn
			820					825					830		
Ser	Leu	Thr	Gln	Glu	Asp	Asp	Phe	Ser	Phe	Glu	Ala	Phe	Ala	Met	Arg
		835					840					845			

Ala 850	Pro 855	Tyr	Ile	Pro	Ile	Asp 855	Asp	Asp	Met	Pro	Leu 860	Leu	Thr	Glu	Thr
Asp 865	Leu	Met	Trp	Cys	Pro 870	Pro	Glu	Asp	Leu	Gln 875	Thr	Met	Val	Pro	Lys 880
Glu	Ile	Asp	Ala	Ile 885	Gln	Gln	Gln	Leu	Gln 890	Leu	Gln	Gln	Gln	Gln	His 895
His	Gln	Gln	Tyr 900	Ala	Gly	Asn	Thr	Gly 905	Tyr	Gln	Gln	Gln	Gln 910	Gln	Gln
Pro	Gln	Leu 915	Gln	Gln	Gln	His	Phe 920	Ser	Asn	Ser	Leu	Cys 925	Ser	Ser	Pro
Ala	Ser 930	Thr	Val	Ser	Ser	Leu 935	Ser	Pro	Ser	Pro	Val 940	Gln	Gln	His	His
Gln 945	Gln	Gln	Gln	Ala	Ala 950	Val	Phe	Thr	Ser	Asp 955	Ser	Ser	Glu	Leu	Ala 960
Ala	Leu	Leu	Cys	Gly 965	Ser	Gly	Asn	Gly	Thr 970	Leu	Ser	Ile	Leu	Ala 975	Gly
Ser	Gly	Val	Thr 980	Val	Ala	Glu	Glu	Cys 985	Asn	Glu	Arg	Leu	Gln 990	Gln	His
Gln	Gln	Gln	Gln	Gln	Gln	Thr	Ser	Gly 1000	Asn	Glu	Phe	Arg	Thr 1005	Phe	Gln
Gln	Leu 1010	Gln	Gln	Glu	Leu	Gln	Leu	Gln	Glu	Glu	Gln 1020	Gln	Gln	Arg	Gln
Gln 1025	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln 1035	Gln	Gln	Gln	Leu	Leu 1040
Ser	Leu	Asn	Ile	Glu 1045	Cys	Lys	Lys	Glu	Lys 1050	Tyr	Asp	Val	Gln	Met	Gly 1055
Gly	Ser	Leu	Cys 1060	His	Pro	Met	Glu	Asp 1065	Ala	Phe	Glu	Asn	Asp 1070	Tyr	Ser
Lys	Asp	Ser 1075	Ala	Asn	Leu	Asp	Cys 1080	Trp	Asp	Leu	Ile	Gln 1085	Met	Gln	Val
Val	Asp 1090	Thr	Glu	Pro	Val	Ser 1095	Pro	Asn	Ala	Ala	Ser 1100	Pro	Thr	Pro	Cys
Lys 1105	Val	Ser	Ala	Ile	Gln	Leu 1110	Leu	Gln	Gln	Gln 1115	Gln	Gln	Leu	Gln	Gln 1120
Gln	Gln	Gln	Gln	Gln 1125	Gln	Asn	Ile	Ile	Leu 1130	Asn	Ala	Val	Pro	Leu	Ile 1135
Thr	Ile	Gln	Asn 1140	Asn	Lys	Glu	Leu	Met 1145	Gln	Gln	Gln	Gln	Gln 1150	Gln	Gln
Gln	Gln	Gln 1155	Gln	Gln	Glu	Gln	Leu 1160	Gln	Gln	Pro	Ala	Ile 1165	Lys	Leu	Leu
Asn	Gly 1170	Ala	Ser	Ile	Ala	Pro 1175	Val	Asn	Thr	Lys 1180	Ala	Thr	Ile	Arg	Leu
Val 1185	Glu	Ser	Lys	Pro	Pro 1190	Thr	Thr	Thr	Gln	Ser 1195	Arg	Met	Ala	Lys	Val 1200
Asn	Leu	Val	Pro	Gln 1205	Gln	Gln	His	Gly 1210	Asn	Lys	Arg	His	Leu	Asn	1215
Ser	Ala	Thr	Gly 1220	Ala	Gly	Asn	Pro	Val 1225	Glu	Ser	Lys	Arg	Leu	Lys	Ser 1230
Gly	Thr	Leu 1235	Cys	Leu	Asp	Val	Gln 1240	Ser	Pro	Gln	Leu	Leu 1245	Gln	Gln	Leu
Ile	Gly 1250	Lys	Asp	Pro	Ala	Gln 1255	Gln	Gln	Thr	Gln	Ala 1260	Ala	Lys	Arg	Ala
Gly 1265	Ser	Glu	Arg	Trp	Gln 1270	Leu	Ser	Ala	Glu	Ser 1275	Lys	Gln	Gln	Lys	Gln 1280
Gln	Gln	Gln	Gln	Ser 1285	Asn	Ser	Val	Leu 1290	Lys	Asn	Leu	Leu	Val	Ser	Gly 1295
Arg	Asp	Asp	Asp 1300	Asp	Ser	Glu	Ala	Met 1305	Ile	Ile	Asp	Glu	Asp 1310	Asn	Ser
Leu	Val	Gln 1315	Pro	Ile	Pro	Leu	Gly 1320	Lys	Tyr	Gly	Leu	Pro 1325	Leu	His	Cys
His	Thr 1330	Ser	Thr	Ser	Ser	Val 1335	Leu	Arg	Asp	Tyr	His 1340	Asn	Asn	Pro	Leu
Ile	Ser	Gly	Thr	Asn	Phe	Gln	Leu	Ser	Pro	Val	Phe	Gly	Gly	Ser	Asp

1345                      1350                      1355                      1360  
 Ser Ser Gly Gly Asp Gly Glu Thr Gly Ser Val Val Ser Leu Asp Asp  
                                  1365                      1370                      1375  
 Ser Val Pro Pro Gly Leu Thr Ala Cys Asp Thr Asp Ala Ser Ser Asp  
                                  1380                      1385                      1390  
 Ser Gly Ile Asp Glu Asn Ser Leu Met Asp Gly Ala Ser Gly Ser Pro  
                                  1395                      1400                      1405  
 Arg Lys Arg Leu Ser Ser Thr Ser Asn Ser Thr Asn Gln Ala Glu Ser  
                                  1410                      1415                      1420  
 Ala Pro Pro Ala Leu Asp Val Glu Thr Pro Val Thr Gln Lys Ser Val  
 1425                      1430                      1435                      1440  
 Glu Glu Glu Phe Glu Gly Gly Gly Ser Gly Ser Asn Ala Pro Ser Arg  
                                  1445                      1450                      1455  
 Lys Thr Ser Ile Ser Phe Leu Asp Ser Ser Asn Pro Leu Leu His Thr  
                                  1460                      1465                      1470  
 Pro Ala Met Met Asp Leu Val Asn Asp Asp Tyr Ile Met Gly Glu Gly  
                                  1475                      1480                      1485  
 Gly Phe Glu Phe Ser Asp Asn Gln Leu Glu Gln Val Leu Gly Trp Pro  
                                  1490                      1495                      1500  
 Glu Ile Ala  
 1505

<210> 38  
 <211> 879  
 <212> PRT  
 <213> Homo sapiens

<400> 38  
 Met Ala Gly Gly Gly Gly Asp Leu Ser Thr Arg Arg Leu Asn Glu Cys  
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 Ile Ser Pro Val Ala Asn Glu Met Asn His Leu Pro Ala His Ser His  
                                   20                                  25                                  30  
 Asp Leu Gln Arg Met Phe Thr Glu Asp Gln Gly Val Asp Asp Arg Leu  
                                   35                                  40                                  45  
 Leu Tyr Asp Ile Val Phe Lys His Phe Lys Arg Asn Lys Val Glu Ile  
                                   50                                  55                                  60  
 Ser Asn Ala Ile Lys Lys Thr Phe Pro Phe Leu Glu Gly Leu Arg Asp  
 65                                  70                                  75                                  80  
 Arg Asp Leu Ile Thr Asn Lys Met Phe Glu Asp Ser Gln Asp Ser Cys  
                                   85                                  90                                  95  
 Arg Asn Leu Val Pro Val Gln Arg Val Val Tyr Asn Val Leu Ser Glu  
                                   100                                  105                                  110  
 Leu Glu Lys Thr Phe Asn Leu Pro Val Leu Glu Ala Leu Phe Ser Asp  
                                   115                                  120                                  125  
 Val Asn Met Gln Glu Tyr Pro Asp Leu Ile His Ile Tyr Lys Gly Phe  
                                   130                                  135                                  140  
 Glu Asn Val Ile His Asp Lys Leu Pro Leu Gln Glu Ser Glu Glu Glu  
 145                                  150                                  155                                  160  
 Glu Arg Glu Glu Arg Ser Gly Leu Gln Leu Ser Leu Glu Gln Gly Thr  
                                   165                                  170                                  175  
 Gly Glu Asn Ser Phe Arg Ser Leu Thr Trp Pro Pro Ser Gly Ser Pro  
                                   180                                  185                                  190  
 Ser His Ala Gly Thr Thr Pro Pro Glu Asn Gly Leu Ser Glu His Pro  
                                   195                                  200                                  205  
 Cys Glu Thr Glu Gln Ile Asn Ala Lys Arg Lys Asp Thr Thr Ser Asp  
                                   210                                  215                                  220  
 Lys Asp Asp Ser Leu Gly Ser Gln Gln Thr Asn Glu Gln Cys Ala Gln  
 225                                  230                                  235                                  240  
 Lys Ala Glu Pro Thr Glu Ser Cys Glu Gln Ile Ala Val Gln Val Asn  
                                   245                                  250                                  255  
 Asn Gly Asp Ala Gly Arg Glu Met Pro Cys Pro Leu Pro Cys Asp Glu  
                                   260                                  265                                  270

Glu	Ser	Pro	Glu	Ala	Glu	Leu	His	Asn	His	Gly	Ile	Gln	Ile	Asn	Ser
		275					280					285			
Cys	Ser	Val	Arg	Leu	Val	Asp	Ile	Lys	Lys	Glu	Lys	Pro	Phe	Ser	Asn
	290					295					300				
Ser	Lys	Val	Glu	Cys	Gln	Ala	Gln	Ala	Arg	Thr	His	His	Asn	Gln	Ala
305					310					315					320
Ser	Asp	Ile	Ile	Val	Ile	Ser	Ser	Glu	Asp	Ser	Glu	Gly	Ser	Thr	Asp
				325					330					335	
Val	Asp	Glu	Pro	Leu	Glu	Val	Phe	Ile	Ser	Ala	Pro	Arg	Ser	Glu	Pro
			340					345					350		
Val	Ile	Asn	Asn	Asp	Asn	Pro	Leu	Glu	Ser	Asn	Asp	Glu	Lys	Glu	Gly
		355					360					365			
Gln	Glu	Ala	Thr	Cys	Ser	Arg	Pro	Gln	Ile	Val	Pro	Glu	Pro	Met	Asp
370						375					380				
Phe	Arg	Lys	Leu	Ser	Thr	Phe	Arg	Glu	Ser	Phe	Lys	Lys	Arg	Val	Ile
385					390					395					400
Gly	Gln	Asp	His	Asp	Phe	Ser	Glu	Ser	Ser	Glu	Glu	Glu	Ala	Pro	Ala
				405					410					415	
Glu	Ala	Ser	Ser	Gly	Ala	Leu	Arg	Ser	Lys	His	Gly	Glu	Lys	Ala	Pro
			420					425					430		
Met	Thr	Ser	Arg	Ser	Thr	Ser	Thr	Trp	Arg	Ile	Pro	Ser	Arg	Lys	Arg
		435					440					445			
Arg	Phe	Ser	Ser	Ser	Asp	Phe	Ser	Asp	Leu	Ser	Asn	Gly	Glu	Glu	Leu
	450					455					460				
Gln	Glu	Thr	Cys	Ser	Ser	Ser	Leu	Arg	Arg	Gly	Ser	Gly	Ser	Gln	Pro
465					470					475					480
Gln	Glu	Pro	Glu	Asn	Lys	Lys	Cys	Ser	Cys	Val	Met	Cys	Phe	Pro	Lys
				485					490					495	
Gly	Val	Pro	Arg	Ser	Gln	Glu	Ala	Arg	Thr	Glu	Ser	Ser	Gln	Ala	Ser
			500					505					510		
Asp	Met	Met	Asp	Thr	Met	Asp	Val	Glu	Asn	Asn	Ser	Thr	Leu	Glu	Lys
		515					520					525			
His	Ser	Gly	Lys	Arg	Arg	Lys	Lys	Arg	Arg	His	Arg	Ser	Lys	Val	Asn
	530					535					540				
Gly	Leu	Gln	Arg	Gly	Arg	Lys	Lys	Asp	Arg	Pro	Arg	Lys	His	Leu	Thr
545					550					555					560
Leu	Asn	Asn	Lys	Val	Gln	Lys	Lys	Arg	Trp	Gln	Gln	Arg	Gly	Arg	Lys
				565					570					575	
Ala	Asn	Thr	Arg	Pro	Leu	Lys	Arg	Arg	Lys	Arg	Gly	Pro	Arg	Ile	
			580					585				590			
Pro	Lys	Asp	Glu	Asn	Ile	Asn	Phe	Lys	Gln	Ser	Glu	Leu	Pro	Val	Thr
		595					600					605			
Cys	Gly	Glu	Val	Lys	Gly	Thr	Leu	Tyr	Lys	Glu	Arg	Phe	Lys	Gln	Gly
	610					615					620				
Thr	Ser	Lys	Lys	Cys	Ile	Gln	Ser	Glu	Asp	Lys	Lys	Trp	Phe	Thr	Pro
625					630					635					640
Arg	Glu	Phe	Glu	Ile	Glu	Gly	Asp	Arg	Gly	Ala	Ser	Lys	Asn	Trp	Lys
				645					650					655	
Leu	Ser	Ile	Arg	Cys	Gly	Gly	Tyr	Thr	Leu	Lys	Val	Leu	Met	Glu	Asn
			660					665					670		
Lys	Phe	Leu	Pro	Glu	Pro	Pro	Ser	Thr	Arg	Lys	Lys	Arg	Ile	Leu	Glu
		675					680					685			
Ser	His	Asn	Asn	Thr	Leu	Val	Asp	Pro	Cys	Glu	Glu	His	Lys	Lys	Lys
	690					695					700				
Asn	Pro	Asp	Ala	Ser	Val	Lys	Phe	Ser	Glu	Phe	Leu	Lys	Lys	Cys	Ser
705					710					715					720
Glu	Thr	Trp	Lys	Thr	Ile	Phe	Ala	Lys	Glu	Lys	Gly	Lys	Phe	Glu	Asp
				725					730					735	
Met	Ala	Lys	Ala	Asp	Lys	Ala	His	Tyr	Glu	Arg	Glu	Met	Lys	Thr	Tyr
			740					745					750		
Ile	Pro	Pro	Lys	Gly	Glu	Lys	Lys	Lys	Lys	Phe	Lys	Asp	Pro	Asn	Ala
		755					760					765			
Pro	Lys	Arg	Pro	Pro	Leu	Ala	Phe	Phe	Leu	Phe	Cys	Ser	Glu	Tyr	Arg



770		775		780
Pro Lys Ile Lys Gly Glu His Pro Gly Leu Ser Ile Asp Asp Val Val				
785		790		795
Lys Lys Leu Ala Gly Met Trp Asn Asn Thr Ala Ala Ala Asp Lys Gln				
	805		810	
Phe Tyr Glu Lys Lys Ala Ala Lys Leu Lys Glu Lys Tyr Lys Lys Asp				
	820		825	
Ile Ala Ala Tyr Arg Ala Lys Gly Lys Pro Asn Ser Ala Lys Lys Arg				
	835		840	
Val Val Lys Ala Glu Lys Ser Lys Lys Lys Lys Glu Glu Glu Glu Asp				
	850		855	
Glu Glu Asp Glu Gln Glu Glu Glu Asn Glu Glu Asp Asp Asp Lys				
865		870		875

<210> 39  
 <211> 284  
 <212> PRT  
 <213> Gallus gallus

<400> 39
Met Glu Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu
1 5 10 15
Asn Ala Ile Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Gln Ala
20 25 30
Glu Asp Arg Cys Lys Gln Leu Glu Glu Gln Gln Gly Leu Gln Lys
35 40 45
Lys Leu Lys Gly Thr Glu Asp Glu Val Glu Lys Tyr Ser Glu Ser Val
50 55 60
Lys Glu Ala Gln Glu Lys Leu Glu Gln Ala Glu Lys Lys Ala Thr Asp
65 70 75 80
Ala Glu Ala Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu
85 90 95
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys
100 105 110
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys
115 120 125
Val Ile Glu Asn Arg Ala Met Lys Asp Glu Glu Lys Met Glu Leu Gln
130 135 140
Glu Met Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg
145 150 155 160
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Val Leu Glu Gly Glu Leu
165 170 175
Glu Arg Ser Glu Glu Arg Ala Glu Val Ala Glu Ser Arg Val Arg Gln
180 185 190
Leu Glu Glu Glu Leu Arg Thr Met Asp Gln Ser Leu Lys Ser Leu Ile
195 200 205
Ala Ser Glu Glu Glu Tyr Ser Thr Lys Glu Asp Lys Tyr Glu Glu Glu
210 215 220
Ile Lys Leu Leu Gly Glu Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu
225 230 235 240
Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu
245 250 255
Glu Glu Ser Leu Ala Ser Ala Lys Glu Glu Asn Val Gly Ile His Gln
260 265 270
Val Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Leu
275 280

<210> 40  
 <211> 284  
 <212> PRT  
 <213> Homo sapiens

<400> 40  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
 130 135 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu  
 165 170 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu  
 180 185 190  
 Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Arg Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
 Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
 260 265 270  
 Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile  
 275 280

<210> 41  
 <211> 284  
 <212> PRT  
 <213> Gallus gallus

<400> 41  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Asp Ile Val Gln Leu Glu Lys  
 35 40 45  
 Gln Leu Arg Val Thr Glu Asp Ser Arg Asp Gln Val Leu Glu Glu Leu  
 50 55 60  
 His Lys Ser Glu Asp Ser Leu Leu Ser Ala Glu Glu Asn Ala Ala Lys  
 65 70 75 80  
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
 130 135 140

Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Leu	Glu	Gly	Asp	Leu
				165					170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Leu	Val	Thr	Asn	Glu	Ala	Lys	Ser	Leu	Glu
		195					200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Glu	Lys	Val	Ala	His	Ala	Lys	Glu	Glu	Asn	Leu	Asn	Met	His	Gln
			260					265					270		
Met	Leu	Asp	Gln	Thr	Leu	Leu	Glu	Leu	Asn	Asn	Met				
		275					280								

<210> 42  
 <211> 248  
 <212> PRT  
 <213> Gallus gallus

<400> 42

Met	Ala	Gly	Ile	Ser	Ser	Ile	Asp	Ala	Val	Lys	Lys	Lys	Ile	Gln	Ser
1				5					10					15	
Leu	Gln	Gln	Val	Ala	Asp	Glu	Ala	Glu	Glu	Arg	Ala	Glu	His	Leu	Gln
			20					25					30		
Arg	Glu	Ala	Asp	Ala	Glu	Arg	Gln	Ala	Arg	Glu	Arg	Ala	Glu	Ala	Glu
		35					40					45			
Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu	Glu	Glu	Leu	Asp
	50					55					60				
Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys	Leu	Glu	Glu	Ala
65					70				75						80
Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	Val	Ile	Glu	Asn
				85					90					95	
Arg	Ala	Met	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln	Glu	Met	Gln	Leu
			100					105					110		
Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg	Lys	Tyr	Glu	Glu
		115					120					125			
Val	Ala	Arg	Lys	Leu	Val	Val	Leu	Glu	Gly	Glu	Leu	Glu	Arg	Ser	Glu
	130					135					140				
Glu	Arg	Ala	Glu	Val	Ala	Glu	Ser	Arg	Val	Arg	Gln	Leu	Glu	Glu	Glu
145					150					155					160
Leu	Arg	Thr	Met	Asp	Gln	Ser	Leu	Lys	Ser	Leu	Ile	Ala	Ser	Glu	Glu
				165					170					175	
Glu	Tyr	Ser	Thr	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	Ile	Lys	Leu	Leu
			180					185					190		
Gly	Glu	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	Phe	Ala	Glu	Arg
		195					200					205			
Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu	Glu	Glu	Ser	Leu
	210					215					220				
Ala	Ser	Ala	Lys	Glu	Glu	Asn	Val	Gly	Ile	His	Gln	Val	Leu	Asp	Gln
225					230					235					240
Thr	Leu	Leu	Glu	Leu	Asn	Asn	Leu								
				245											

<210> 43  
 <211> 284  
 <212> PRT

<213> Homo sapiens

<400> 43

Met	Glu	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Glu	Gln	Lys	Gln	Ala
			20					25					30		
Glu	Glu	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Ala	Ala	Met	Gln	Lys
		35					40					45			
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu
	50					55					60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Glu	Lys	Lys	Ala	Ala	Asp
65					70				75						80
Ala	Glu	Ala	Glu	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Asn	Arg	Ala	Leu	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln
	130					135					140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145					150				155						160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu
				165				170						175	
Glu	Arg	Thr	Glu	Glu	Arg	Ala	Glu	Leu	Ala	Glu	Ser	Lys	Cys	Ser	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Asn	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
		195					200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Ile	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu
				245				250						255	
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
			260					265					270		
Glu	Leu	Asp	His	Ala	Leu	Asn	Asp	Met	Thr	Ser	Ile				
		275					280								

<210> 44

<211> 245

<212> PRT

<213> Gallus gallus

<400> 44

Met	Ala	Ala	Leu	Ser	Ser	Leu	Glu	Ala	Val	Arg	Lys	Lys	Ile	Arg	Ser
1				5					10					15	
Leu	Gln	Glu	Gln	Ala	Asp	Ala	Ala	Glu	Glu	Arg	Ala	Gly	Lys	Leu	Gln
			20					25					30		
Arg	Glu	Val	Asp	Gln	Glu	Arg	Ala	Leu	Arg	Glu	Glu	Ala	Glu	Ser	Glu
		35					40					45			
Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu	Glu	Glu	Leu	Asp
	50					55					60				
Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys	Leu	Glu	Glu	Ala
65					70				75						80
Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	Val	Ile	Glu	Asn
				85					90					95	
Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln	Glu	Ile	Gln	Leu
			100					105					110		
Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg	Lys	Tyr	Glu	Glu
		115					120					125			

Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu	Glu	Arg	Ala	Glu
130						135					140				
Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu	Leu	Glu	Glu	Glu
145					150					155					160
Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu	Ala	Gln	Ala	Glu
				165					170					175	
Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	Ile	Lys	Val	Leu
			180					185					190		
Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	Phe	Ala	Glu	Arg
		195					200					205			
Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu	Glu	Asp	Gln	Leu
	210					215					220				
Tyr	Gln	Gln	Leu	Glu	Gln	Asn	Ser	Arg	Leu	Thr	Asn	Glu	Leu	Lys	Leu
225					230					235					240
Ala	Leu	Asn	Glu	Asp											
				245											

<210> 45  
 <211> 281  
 <212> PRT  
 <213> Gallus gallus

<400> 45															
Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Ala	Ala
			20					25					30		
Glu	Glu	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ala	Leu	Gln	Lys
		35					40					45			
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ser	Leu
	50					55					60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Asp	Lys	Lys	Ala	Thr	Asp
65					70					75					80
Ala	Glu	Ser	Glu	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Asn	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
	130					135						140			
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu
				165					170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
		195					200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Gln	Leu	Tyr	Gln	Gln	Leu	Glu	Gln	Asn	Ser	Arg	Leu	Thr	Asn
			260					265					270		
Glu	Leu	Lys	Leu	Ala	Leu	Asn	Glu	Asp							
		275					280								

<210> 46

<211> 284  
 <212> PRT  
 <213> Brachydanio rerio

<400> 46

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Thr	Asp	Lys	Lys	Ala	Ala
			20					25					30		
Glu	Glu	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Asp	Leu	Val	Ala	Leu	Gln	Lys
		35					40					45			
Lys	Leu	Lys	Ala	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu
	50					55					60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Glu	Lys	Lys	Ala	Thr	Asp
65					70					75					80
Ala	Glu	Gly	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
			85						90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Asn	Arg	Ala	Leu	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln
	130					135					140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Val	Glu	Gly	Glu	Leu
				165					170					175	
Glu	Arg	Thr	Glu	Glu	Arg	Ala	Glu	Leu	Asn	Glu	Gly	Lys	Cys	Ser	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Met	Lys	Ser	Leu	Glu
		195					200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Ala	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
			260					265					270		
Glu	Leu	Asp	His	Ala	Leu	Asn	Asp	Met	Thr	Ser	Ile				
		275					280								

<210> 47  
 <211> 284  
 <212> PRT  
 <213> Coturnix coturnix japonica

<400> 47

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Ala	Ala
			20					25					30		
Glu	Glu	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ala	Leu	Gln	Lys
		35					40					45			
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ser	Leu
	50					55					60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Asp	Lys	Lys	Ala	Thr	Asp
65					70					75					80
Ala	Glu	Ser	Glu	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		

Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Asn	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
	130					135					140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145				150					155						160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu
			165						170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
		195				200						205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225				230					235						240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
			245						250					255	
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
			260					265					270		
Glu	Leu	Asp	His	Ala	Leu	Asn	Asp	Met	Thr	Ser	Ile				
		275					280								

<210> 48  
 <211> 284  
 <212> PRT  
 <213> Mus musculus

<400> 48

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Ala	Ala
		20						25					30		
Glu	Asp	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ser	Leu	Gln	Lys
	35					40					45				
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu
	50				55					60					
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Glu	Lys	Lys	Ala	Thr	Asp
65				70					75						80
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
			85					90						95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
		100					105					110			
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Ser	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
	130					135					140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg
145				150					155						160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu
			165						170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
		195				200						205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225				230					235						240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
			245						250					255	
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu

	260		265		270
Glu Leu Asp	His Ala Leu Asn Asp	Met Thr Ser Ile			
275		280			

<210> 49  
 <211> 284  
 <212> PRT  
 <213> Rana temporaria

<400> 49  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Gly Ala  
 20 25 30  
 Glu Asp Lys Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Met Gln Lys  
 35 40 45  
 Lys Met Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Asn Arg Ala Leu Lys Asp Glu Glu Lys Ile Glu Leu Gln  
 130 135 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu  
 165 170 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu  
 180 185 190  
 Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Thr Val Ala Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
 Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
 260 265 270  
 Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile  
 275 280

<210> 50  
 <211> 284  
 <212> PRT  
 <213> Rattus norvegicus

<400> 50  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
 50 55 60



Lys 65	Asp	Ala	Gln	Glu	Lys 70	Leu	Glu	Leu	Ala	Glu 75	Lys	Lys	Ala	Thr	Asp 80
Ala	Glu	Ala	Asp	Val 85	Ala	Ser	Leu	Asn	Arg 90	Arg	Ile	Gln	Leu	Val 95	Glu
Glu	Glu	Leu	Asp 100	Arg	Ala	Gln	Glu	Arg 105	Leu	Ala	Thr	Ala	Leu	Gln 110	Lys
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala 120	Asp	Glu	Ser	Glu	Arg 125	Gly	Met	Lys
Val 130	Ile	Glu	Ser	Arg	Ala	Gln 135	Lys	Asp	Glu	Glu	Lys 140	Met	Glu	Ile	Gln
Glu 145	Ile	Gln	Leu	Lys	Glu 150	Ala	Lys	His	Ile	Ala 155	Glu	Asp	Ala	Asp 160	Arg
Lys	Tyr	Glu	Glu	Val 165	Ala	Arg	Lys	Leu	Val 170	Ile	Ile	Glu	Ser	Asp 175	Leu
Glu	Arg	Ala	Glu 180	Glu	Arg	Ala	Glu	Leu 185	Ser	Glu	Gly	Lys	Cys 190	Ala	Glu
Leu	Glu	Glu	Glu 195	Glu	Leu	Lys	Thr 200	Val	Thr	Asn	Asn	Leu	Lys 205	Ser	Leu
Ala	Gln	Ala	Glu	Lys	Tyr	Ser 215	Gln	Lys	Glu	Asp	Lys 220	Tyr	Glu	Glu	Glu
Ile 225	Lys	Val	Leu	Ser	Asp 230	Lys	Leu	Lys	Glu	Ala 235	Glu	Thr	Arg	Ala	Glu
Phe	Ala	Glu	Arg	Ser 245	Val	Thr	Lys	Leu	Glu 250	Lys	Ser	Ile	Asp	Asp 255	Leu
Glu	Asp	Glu	Leu 260	Tyr	Ala	Gln	Lys	Leu 265	Lys	Tyr	Lys	Ala	Ile 270	Ser	Glu
Glu	Leu	Asp 275	His	Ala	Leu	Lys	Asp 280	Met	Thr	Ser	Ile				

<210> 51  
 <211> 284  
 <212> PRT  
 <213> *Xenopus laevis*

<400> 51

Met 1	Asp	Ala	Ile	Lys 5	Lys	Lys	Met	Gln	Met 10	Leu	Lys	Leu	Asp	Lys 15	Glu
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala 25	Glu	Ala	Asp	Lys	Lys 30	Gly	Ala
Glu	Asp	Lys 35	Ser	Lys	Gln	Leu	Glu 40	Asp	Glu	Leu	Val 45	Ala	Leu	Gln	Lys
Lys 50	Leu	Lys	Gly	Thr	Glu	Asp 55	Glu	Leu	Asp	Lys	Tyr 60	Ser	Glu	Ala	Leu
Lys 65	Asp	Ala	Gln	Glu	Lys 70	Leu	Glu	Leu	Ser	Asp 75	Lys	Lys	Ala	Thr	Asp 80
Ala	Glu	Gly	Asp	Val 85	Ala	Ser	Leu	Asn 90	Arg	Arg	Ile	Gln	Leu	Val 95	Glu
Glu	Glu	Leu	Asp 100	Arg	Ala	Gln	Glu	Arg 105	Leu	Ser	Thr	Ala	Leu	Gln	Lys
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala 120	Asp	Glu	Ser	Glu	Arg 125	Gly	Met	Lys
Val 130	Ile	Glu	Asn	Arg	Ala	Leu 135	Lys	Asp	Glu	Glu	Lys 140	Met	Glu	Leu	Gln
Glu 145	Ile	Gln	Leu	Lys	Glu 150	Ala	Lys	His	Ile	Ala 155	Glu	Glu	Ala	Asp 160	Arg
Lys	Tyr	Glu	Glu	Val 165	Ala	Arg	Lys	Leu	Val 170	Ile	Ile	Glu	Gly	Asp 175	Leu
Glu	Arg	Ala	Glu 180	Glu	Arg	Ala	Glu	Leu 185	Ser	Glu	Ser	Lys	Cys 190	Ala	Glu
Leu	Glu	Glu	Glu 195	Glu	Leu	Lys	Thr 200	Val	Thr	Asn	Asn	Leu	Lys 205	Ser	Leu
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu

210		215		220
Ile Lys Val Leu Thr Asp	Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu			
225		230		240
Phe Ala Glu Arg Thr Val Ala Lys Leu Glu Lys Ser Ile Asp Asp Leu				
		245		255
Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu				
		260		270
Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile				
275		280		

<210> 52  
 <211> 284  
 <212> PRT  
 <213> Gallus gallus

<400> 52

Met Glu Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu	
1	15
Asn Ala Ile Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Gln Ala	
	30
Glu Asp Arg Cys Lys Gln Leu Glu Glu Glu Gln Gln Gly Leu Gln Lys	
	45
Lys Leu Lys Gly Thr Glu Asp Glu Val Glu Lys Tyr Ser Glu Ser Val	
	60
Lys Glu Ala Gln Glu Lys Leu Glu Gln Ala Glu Lys Lys Ala Thr Asp	
65	80
Ala Glu Ala Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu	
	95
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys	
	110
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys	
	125
Val Ile Glu Asn Arg Ala Met Lys Asp Glu Glu Lys Met Glu Leu Gln	
	140
Glu Met Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg	
145	160
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Val Leu Glu Gly Glu Leu	
	175
Glu Arg Ser Glu Glu Arg Ala Glu Val Ala Glu Ser Lys Cys Gly Asp	
	190
Leu Glu Glu Glu Leu Lys Ile Val Thr Asn Asn Leu Lys Ser Leu Glu	
	205
Ala Gln Ala Asp Lys Tyr Ser Thr Lys Glu Asp Lys Tyr Glu Glu Glu	
	220
Ile Lys Leu Leu Gly Glu Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu	
225	240
Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu	
	255
Glu Asp Glu Val Tyr Ala Gln Lys Met Lys Tyr Lys Ala Ile Ser Glu	
	270
Glu Leu Asp Asn Ala Leu Asn Asp Ile Thr Ser Leu	
275	280

<210> 53  
 <211> 284  
 <212> PRT  
 <213> Homo sapiens

<400> 53

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu
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1				5				10					15			
Asn	Ala	Ile	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Gln	Ala	
			20					25					30			
Glu	Asp	Arg	Cys	Lys	Gln	Leu	Glu	Glu	Glu	Gln	Gln	Ala	Leu	Gln	Lys	
			35				40					45				
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Val	Glu	Lys	Tyr	Ser	Glu	Ser	Val	
	50					55					60					
Lys	Glu	Ala	Gln	Glu	Lys	Leu	Glu	Gln	Ala	Glu	Lys	Lys	Ala	Thr	Asp	
	65				70					75					80	
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu	
				85					90					95		
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys	
			100					105					110			
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	
		115					120					125				
Val	Ile	Glu	Asn	Arg	Ala	Met	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln	
	130					135					140					
Glu	Met	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ser	Asp	Arg	
	145				150					155					160	
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Leu	Glu	Gly	Glu	Leu	
				165					170					175		
Glu	Arg	Ser	Glu	Glu	Arg	Ala	Glu	Val	Ala	Glu	Ser	Lys	Cys	Gly	Asp	
			180					185					190			
Leu	Glu	Glu	Glu	Leu	Lys	Ile	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu	
		195					200					205				
Ala	Gln	Ala	Asp	Lys	Tyr	Ser	Thr	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	
	210					215					220					
Ile	Lys	Leu	Leu	Glu	Glu	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	
	225				230					235					240	
Phe	Ala	Glu	Arg	Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu	
				245					250					255		
Glu	Asp	Glu	Val	Tyr	Ala	Gln	Lys	Met	Lys	Tyr	Lys	Ala	Ile	Ser	Glu	
			260					265					270			
Glu	Leu	Asp	Asn	Ala	Leu	Asn	Asp	Ile	Thr	Ser	Leu					
		275					280									

<210> 54  
 <211> 284  
 <212> PRT  
 <213> Mus musculus

<400> 54																
Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu	
1				5				10					15			
Asn	Ala	Ile	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Gln	Ala	
			20					25					30			
Glu	Asp	Arg	Cys	Lys	Gln	Leu	Glu	Glu	Glu	Gln	Gln	Ala	Leu	Gln	Lys	
			35				40					45				
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Val	Glu	Lys	Tyr	Ser	Glu	Ser	Val	
	50					55					60					
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Gln	Ala	Glu	Lys	Lys	Ala	Thr	Asp	
	65				70					75					80	
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu	
				85					90					95		
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys	
			100					105					110			
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	
		115					120					125				
Val	Ile	Glu	Asn	Arg	Ala	Met	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln	
	130					135					140					
Glu	Met	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ser	Asp	Arg	
	145				150					155					160	

Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Leu	Glu	Gly	Glu	Leu
				165					170					175	
Glu	Arg	Ser	Glu	Glu	Arg	Ala	Glu	Val	Ala	Glu	Ser	Lys	Cys	Gly	Asp
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Ile	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
		195					200					205			
Ala	Gln	Ala	Asp	Lys	Tyr	Ser	Thr	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Leu	Leu	Glu	Glu	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Glu	Val	Tyr	Ala	Gln	Lys	Met	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
			260					265					270		
Glu	Leu	Asp	Asn	Ala	Leu	Asn	Asp	Ile	Thr	Ser	Leu				
		275					280								

<210> 55  
 <211> 284  
 <212> PRT  
 <213> Sus scrofa

<400> 55															
Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Asp	Glu	Ala	Glu	Ala	Asp	Lys	Lys	Ala	Ala
			20					25					30		
Glu	Asp	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ser	Leu	Gln	Lys
		35					40					45			
Lys	Leu	Lys	Ala	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu
	50					55					60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Glu	Lys	Lys	Ala	Thr	Asp
65					70					75					80
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Phe	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
			100					105					110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
		115					120					125			
Val	Ile	Glu	Ser	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
	130					135						140			
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg
145					150					155					160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu
				165					170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu
			180					185					190		
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
		195					200					205			
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
	210					215					220				
Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
225					230					235					240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
			260					265					270		
Glu	Leu	Asp	His	Ala	Leu	Asn	Asp	Met	Thr	Ser	Ile				
		275					280								

<210> 56

<211> 284  
 <212> PRT  
 <213> Gallus gallus

<400> 56  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ser Leu  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Asp Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
 130 135 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu  
 165 170 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Gln Val Arg Gln  
 180 185 190  
 Leu Glu Glu Gln Leu Arg Ile Met Asp Gln Thr Leu Lys Ala Leu Met  
 195 200 205  
 Ala Ala Glu Asp Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
 Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Asn Met His Gln  
 260 265 270  
 Met Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Met  
 275 280

<210> 57  
 <211> 284  
 <212> PRT  
 <213> Coturnix coturnix japonica

<400> 57  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ser Leu  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Asp Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys

Leu	Glu	Glu	100	Glu	Lys	Ala	Ala	105	Asp	Glu	Ser	Glu	Arg	110	Gly	Met	Lys
		115					120						125				
Val	Ile	Glu	Asn	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln		
	130					135						140					
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg		
145					150					155					160		
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu		
			165						170					175			
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu		
			180					185					190				
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu		
		195					200					205					
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu		
	210					215					220						
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu		
225					230				235						240		
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu		
			245					250						255			
Glu	Glu	Lys	Val	Ala	His	Ala	Lys	Glu	Glu	Asn	Leu	Asn	Met	His	Gln		
			260					265					270				
Met	Leu	Asp	Gln	Thr	Leu	Leu	Glu	Leu	Asn	Asn	Met						
		275					280										

<210> 58  
 <211> 248  
 <212> PRT  
 <213> *Xenopus laevis*

<400> 58

Met	Ala	Gly	Ile	Thr	Ser	Leu	Glu	Ala	Val	Lys	Arg	Lys	Ile	Lys	Cys
1				5					10					15	
Leu	Gln	Asp	Gln	Ala	Asp	Glu	Ala	Glu	Glu	Arg	Ala	Glu	Lys	Leu	Gln
			20				25						30		
Arg	Glu	Arg	Asp	Met	Glu	Arg	Lys	Leu	Arg	Glu	Ala	Ala	Glu	Gly	Asp
		35					40					45			
Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu	Glu	Glu	Leu	Asp
	50					55				60					
Arg	Ala	Gln	Glu	Arg	Leu	Ser	Thr	Ala	Leu	Gln	Lys	Leu	Glu	Glu	Ala
65					70				75						80
Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	Val	Ile	Glu	Asn
				85					90					95	
Arg	Ala	Leu	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln	Glu	Ile	Gln	Leu
			100					105					110		
Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg	Lys	Tyr	Glu	Glu
		115					120					125			
Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu	Glu	Arg	Ala	Glu
	130					135					140				
Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	His	Tyr	Arg	Gln	Leu	Glu	Asp	Gln
145					150					155					160
Gln	Arg	Ile	Met	Asp	Gln	Thr	Leu	Lys	Thr	Leu	Ile	Ala	Ser	Glu	Glu
				165					170					175	
Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	Ile	Lys	Val	Leu
			180					185					190		
Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	Phe	Ala	Glu	Arg
		195					200					205			
Thr	Val	Ala	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu	Glu	Glu	Lys	Val
	210					215					220				
Ala	His	Ala	Lys	Glu	Glu	Asn	Leu	Asn	Met	His	Gln	Met	Leu	Asp	Gln
225					230					235					240
Thr	Leu	Leu	Glu	Leu	Asn	Asn	Met								
				245											

<210> 59  
 <211> 284  
 <212> PRT  
 <213> Gallus gallus

<400> 59  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Asp Ile Val Gln Leu Glu Lys  
 35 40 45  
 Gln Leu Arg Val Thr Glu Asp Ser Arg Asp Gln Val Leu Glu Glu Leu  
 50 55 60  
 His Lys Ser Glu Asp Ser Leu Leu Phe Ala Glu Glu Asn Ala Ala Lys  
 65 70 75 80  
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
 130 135 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu  
 165 170 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu  
 180 185 190  
 Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
 Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Asn Met His Gln  
 260 265 270  
 Met Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Met  
 275 280

<210> 60  
 <211> 284  
 <212> PRT  
 <213> Coturnix coturnix japonica

<400> 60  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Asp Ile Val Gln Leu Glu Lys  
 35 40 45  
 Gln Leu Arg Val Thr Glu Asp Ser Arg Asp Gln Val Leu Glu Glu Leu  
 50 55 60  
 His Lys Ser Glu Asp Ser Leu Leu Ser Ala Glu Glu Ile Ala Ala Lys  
 65 70 75 80  
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95

Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys	
			100					105					110			
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	
		115					120					125				
Val	Ile	Glu	Asn	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln	
	130					135					140					
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg	
145					150					155					160	
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu	
				165					170					175		
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu	
			180					185					190			
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu	
		195					200					205				
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	
	210					215					220					
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	
225					230					235					240	
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu	
				245					250					255		
Glu	Glu	Lys	Val	Ala	His	Ala	Lys	Glu	Glu	Asn	Leu	Asn	Met	His	Gln	
			260					265					270			
Met	Leu	Asp	Gln	Thr	Leu	Leu	Glu	Leu	Asn	Asn	Met					
		275					280									

<210> 61  
 <211> 227  
 <212> PRT  
 <213> Homo sapiens

<400> 61

Cys	Arg	Leu	Arg	Ile	Phe	Leu	Arg	Thr	Ala	Ser	Ser	Glu	His	Leu	His	
1				5					10					15		
Glu	Arg	Lys	Leu	Arg	Glu	Thr	Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	
			20					25					30			
Arg	Arg	Ile	Gln	Leu	Val	Glu	Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	
		35				40						45				
Leu	Ala	Thr	Val	Leu	Gln	Lys	Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	
	50					55					60					
Glu	Ser	Glu	Arg	Gly	Met	Lys	Val	Ile	Glu	Ser	Arg	Ala	Gln	Lys	Asp	
65				70					75					80		
Glu	Glu	Lys	Met	Glu	Ile	Gln	Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	
				85					90					95		
Ile	Ala	Glu	Asp	Ala	Asp	Arg	Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	
			100					105					110			
Val	Ile	Ile	Glu	Ser	Asp	Leu	Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	
		115					120					125				
Ser	Glu	Gly	Gln	Val	Arg	Gln	Leu	Glu	Glu	Gln	Leu	Arg	Ile	Met	Asp	
	130					135					140					
Ser	Asp	Leu	Glu	Ser	Ile	Asn	Ala	Ala	Glu	Asp	Lys	Tyr	Ser	Gln	Lys	
145					150					155					160	
Glu	Asp	Arg	Tyr	Glu	Glu	Glu	Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys	
				165					170					175		
Glu	Ala	Glu	Thr	Arg	Ala	Glu	Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	
			180				185						190			
Glu	Lys	Ser	Ile	Asp	Asp	Leu	Glu	Glu	Lys	Val	Ala	His	Ala	Lys	Glu	
		195					200					205				
Glu	Asn	Leu	Ser	Met	His	Gln	Met	Leu	Asp	Gln	Thr	Leu	Leu	Glu	Leu	
	210					215					220					
Asn	Asn	Met														
225																



<210> 62  
 <211> 284  
 <212> PRT  
 <213> Rattus norvegicus

<400> 62  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Asp Arg Ser Lys Gln Leu Glu Glu Asp Ile Ser Ala Lys Glu Lys  
 35 40 45  
 Leu Leu Arg Ala Ser Glu Asp Glu Arg Asp Arg Val Leu Glu Glu Leu  
 50 55 60  
 His Lys Ala Glu Asp Ser Leu Leu Ala Ala Asp Glu Thr Ala Ala Lys  
 65 70 75 80  
 Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
 130 135 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu  
 165 170 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu  
 180 185 190  
 Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
 Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Ser Met His Gln  
 260 265 270  
 Met Leu His Gln Thr Leu Leu Glu Leu Asn Asn Met  
 275 280

<210> 63  
 <211> 281  
 <212> PRT  
 <213> Rattus norvegicus

<400> 63  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Ala Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys

			100					105					110			
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	
		115					120						125			
Val	Ile	Glu	Ser	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln	
	130					135					140					
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg	
145					150					155					160	
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu	
				165					170					175		
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu	
			180					185					190			
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu	
		195					200					205				
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	
	210					215					220					
Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	
225					230					235					240	
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu	
				245					250					255		
Glu	Asp	Gln	Leu	Tyr	His	Gln	Leu	Glu	Gln	Asn	Arg	Arg	Leu	Thr	Asn	
			260					265					270			
Glu	Leu	Lys	Leu	Ala	Leu	Asn	Glu	Asp								
		275					280									

<210> 64  
 <211> 251  
 <212> PRT  
 <213> Rattus norvegicus

<400> 64

Met	Ala	Gly	Ser	Ser	Ser	Leu	Glu	Ala	Val	Arg	Arg	Lys	Ile	Arg	Ser	
1				5					10					15		
Leu	Gln	Glu	Gln	Ala	Asp	Ala	Ala	Glu	Glu	Arg	Ala	Gly	Ser	Leu	Gln	
			20					25					30			
Arg	Glu	Leu	Asp	Gln	Glu	Arg	Lys	Leu	Arg	Glu	Thr	Ala	Glu	Ala	Asp	
		35					40					45				
Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu	Glu	Glu	Leu	Asp	
	50					55					60					
Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys	Leu	Glu	Glu	Ala	
65					70					75					80	
Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	Val	Ile	Glu	Ser	
				85					90					95		
Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln	Glu	Ile	Gln	Leu	
			100					105					110			
Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg	Lys	Tyr	Glu	Glu	
		115					120					125				
Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu	Glu	Arg	Ala	Glu	
	130					135					140					
Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu	Leu	Glu	Glu	Glu	
145					150					155					160	
Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu	Ala	Gln	Ala	Glu	
				165					170					175		
Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	Ile	Lys	Val	Leu	
			180					185					190			
Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	Phe	Ala	Glu	Arg	
		195					200					205				
Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu	Glu	Asp	Lys	Phe	
	210					215					220					
Leu	Cys	Phe	Ser	Pro	Pro	Lys	Thr	Pro	Ser	Ser	Ser	Arg	Met	Ser	His	
225					230					235					240	
Leu	Ser	Glu	Leu	Cys	Ile	Cys	Leu	Leu	Ser	Ser						
				245					250							

<210> 65  
 <211> 245  
 <212> PRT  
 <213> Rattus norvegicus

<400> 65  
 Met Ala Gly Ser Ser Ser Leu Glu Ala Val Arg Arg Lys Ile Arg Ser  
 1 5 10 15  
 Leu Gln Glu Gln Ala Asp Ala Ala Glu Glu Arg Ala Gly Ser Leu Gln  
 20 25 30  
 Arg Glu Leu Asp Gln Glu Arg Lys Leu Arg Glu Thr Ala Glu Ala Asp  
 35 40 45  
 Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Leu Asp  
 50 55 60  
 Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys Leu Glu Glu Ala  
 65 70 75 80  
 Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Ser  
 85 90 95  
 Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln Glu Ile Gln Leu  
 100 105 110  
 Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg Lys Tyr Glu Glu  
 115 120 125  
 Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu Glu Arg Ala Glu  
 130 135 140  
 Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu Leu Glu Glu Glu  
 145 150 155 160  
 Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu Ala Gln Ala Glu  
 165 170 175  
 Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu Ile Lys Val Leu  
 180 185 190  
 Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu Phe Ala Glu Arg  
 195 200 205  
 Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu Glu Asp Gln Leu  
 210 215 220  
 Tyr His Gln Leu Glu Gln Asn Arg Arg Leu Thr Asn Glu Leu Lys Leu  
 225 230 235 240  
 Ala Leu Asn Glu Asp  
 245

<210> 66  
 <211> 961  
 <212> PRT  
 <213> Bos taurus

<400> 66  
 Met Asn Phe Leu Arg Gly Val Met Gly Gly Gln Ser Ala Gly Pro Gln  
 1 5 10 15  
 His Thr Glu Ala Glu Thr Ile Gln Lys Leu Cys Asp Arg Val Ala Ser  
 20 25 30  
 Ser Thr Leu Leu Asp Asp Arg Arg Asn Ala Val Arg Ala Leu Lys Ser  
 35 40 45  
 Leu Ser Lys Lys Tyr Arg Leu Glu Val Gly Ile Gln Ala Met Glu His  
 50 55 60  
 Leu Ile His Val Leu Gln Thr Asp Arg Ser Asp Ser Glu Ile Ile Gly  
 65 70 75 80  
 Tyr Ala Leu Asp Thr Leu Tyr Asn Ile Ile Ser Asn Asp Glu Glu Glu  
 85 90 95  
 Glu Val Glu Glu Asn Ser Thr Arg Gln Ser Glu Asp Leu Gly Ser Gln  
 100 105 110  
 Phe Thr Glu Ile Phe Ile Lys Gln Gln Glu Asn Val Thr Leu Leu Leu  
 115 120 125

Ser	Leu	Leu	Glu	Glu	Phe	Asp	Phe	His	Val	Arg	Trp	Pro	Gly	Val	Lys
130						135					140				
Leu	Leu	Thr	Ser	Leu	Leu	Lys	Gln	Leu	Gly	Pro	Gln	Val	Gln	Gln	Ile
145					150					155					160
Ile	Leu	Val	Ser	Pro	Met	Gly	Val	Ser	Arg	Leu	Met	Asp	Leu	Leu	Ala
				165					170						175
Asp	Ser	Arg	Glu	Val	Ile	Arg	Asn	Asp	Gly	Val	Leu	Leu	Leu	Gln	Ala
			180					185					190		
Leu	Thr	Arg	Ser	Asn	Gly	Ala	Ile	Gln	Lys	Ile	Val	Ala	Phe	Glu	Asn
			195				200					205			
Ala	Phe	Glu	Arg	Leu	Leu	Asp	Ile	Ile	Thr	Glu	Glu	Gly	Asn	Ser	Asp
						215					220				
Gly	Gly	Ile	Val	Val	Glu	Asp	Cys	Leu	Ile	Leu	Leu	Gln	Asn	Leu	Leu
225					230					235					240
Lys	Asn	Asn	Asn	Ser	Asn	Gln	Asn	Phe	Phe	Lys	Glu	Gly	Ser	Tyr	Ile
				245					250					255	
Gln	Arg	Met	Lys	Pro	Trp	Phe	Glu	Val	Gly	Asp	Glu	Asn	Ser	Gly	Trp
			260					265						270	
Ser	Ala	Gln	Lys	Val	Thr	Asn	Leu	His	Leu	Met	Leu	Gln	Leu	Val	Arg
			275				280					285			
Val	Leu	Val	Ser	Pro	Asn	Asn	Pro	Pro	Gly	Ala	Thr	Ser	Ser	Cys	Gln
			290			295					300				
Lys	Ala	Met	Phe	Gln	Cys	Gly	Leu	Leu	Gln	Gln	Leu	Cys	Thr	Ile	Leu
305					310					315					320
Met	Ala	Thr	Gly	Val	Pro	Ala	Asp	Ile	Leu	Thr	Glu	Thr	Ile	Asn	Thr
				325					330					335	
Val	Ser	Glu	Val	Ile	Arg	Gly	Cys	Gln	Val	Asn	Gln	Asp	Tyr	Phe	Ala
			340					345					350		
Ser	Val	Asn	Ala	Pro	Ser	Asn	Pro	Arg	Pro	Ala	Ile	Val	Val	Val	Leu
			355				360				365				
Leu	Met	Ser	Met	Val	Asn	Glu	Arg	Gln	Pro	Phe	Val	Leu	Arg	Cys	Ala
			370			375					380				
Val	Leu	Tyr	Cys	Phe	Gln	Cys	Phe	Leu	Tyr	Lys	Asn	Gln	Lys	Gly	Gln
385					390					395					400
Gly	Glu	Ile	Val	Ser	Thr	Leu	Leu	Pro	Ser	Thr	Ile	Asp	Ala	Thr	Gly
				405					410					415	
Asn	Thr	Val	Ser	Ala	Gly	Gln	Leu	Leu	Cys	Gly	Gly	Leu	Phe	Ser	Thr
			420					425					430		
Asp	Ser	Leu	Ser	Asn	Trp	Cys	Ala	Ala	Val	Ala	Leu	Ala	His	Ala	Leu
			435				440					445			
Gln	Glu	Asn	Ala	Thr	Gln	Lys	Glu	Gln	Leu	Leu	Arg	Val	Gln	Leu	Ala
						455					460				
Thr	Ser	Ile	Gly	Asn	Pro	Pro	Val	Ser	Leu	Leu	Gln	Gln	Cys	Thr	Asn
465					470					475					480
Ile	Leu	Ser	Gln	Gly	Ser	Lys	Ile	Gln	Thr	Arg	Val	Gly	Leu	Leu	Met
				485					490					495	
Leu	Leu	Cys	Thr	Trp	Leu	Ser	Asn	Cys	Pro	Ile	Ala	Val	Thr	His	Phe
				500				505					510		
Leu	His	Asn	Ser	Ala	Asn	Val	Pro	Phe	Leu	Thr	Gly	Gln	Ile	Ala	Glu
				515			520					525			
Asn	Leu	Gly	Glu	Glu	Glu	Gln	Leu	Val	Gln	Gly	Leu	Cys	Ala	Leu	Leu
						535					540				
Leu	Gly	Ile	Ser	Ile	Tyr	Phe	Asn	Asp	Asn	Ser	Leu	Glu	Thr	Tyr	Met
545					550					555					560
Lys	Glu	Lys	Leu	Lys	Gln	Leu	Ile	Glu	Lys	Arg	Ile	Gly	Lys	Glu	Asn
				565					570					575	
Phe	Ile	Glu	Lys	Leu	Gly	Phe	Ile	Ser	Lys	His	Glu	Leu	Tyr	Ser	Arg
			580					585					590		
Ala	Ser	Gln	Lys	Pro	Gln	Pro	Asn	Phe	Pro	Ser	Pro	Glu	Tyr	Met	Ile
			595				600					605			
Phe	Asp	His	Glu	Phe	Thr	Lys	Leu	Val	Lys	Glu	Leu	Glu	Gly	Val	Ile
						615					620				
Thr	Lys	Ala	Ile	Tyr	Lys	Ser	Ser	Glu	Glu	Asp	Lys	Lys	Glu	Glu	Glu

625					630					635					640
Val	Lys	Lys	Thr	Leu	Glu	Gln	His	Asp	Ser	Ile	Val	Thr	His	Tyr	Lys
				645					650					655	
Asn	Met	Ile	Arg	Glu	Gln	Asp	Leu	Gln	Leu	Glu	Glu	Leu	Lys	Gln	Gln
			660					665					670		
Ile	Ser	Thr	Leu	Lys	Cys	Gln	Asn	Glu	Gln	Leu	Gln	Thr	Ala	Val	Thr
		675					680					685			
Gln	Gln	Val	Ser	Gln	Ile	Gln	Gln	His	Lys	Asp	Gln	Tyr	Asn	Leu	Leu
	690					695					700				
Lys	Val	Gln	Leu	Gly	Lys	Asp	Ser	Gln	His	Gln	Gly	Pro	Tyr	Thr	Asp
705				710						715					720
Gly	Ala	Gln	Met	Asn	Gly	Val	Gln	Pro	Glu	Glu	Ile	Ser	Arg	Leu	Arg
			725					730						735	
Glu	Glu	Ile	Glu	Glu	Leu	Lys	Ser	Asn	Arg	Glu	Leu	Leu	Gln	Ser	Gln
			740					745					750		
Leu	Ala	Glu	Lys	Asp	Ser	Leu	Ile	Glu	Asn	Leu	Lys	Ser	Ser	Gln	Leu
	755					760						765			
Ser	Pro	Gly	Thr	Asn	Glu	Gln	Ser	Ser	Ala	Thr	Ala	Gly	Asp	Ser	Glu
	770					775					780				
Gln	Ile	Ala	Glu	Leu	Lys	Gln	Glu	Leu	Ala	Thr	Leu	Lys	Ser	Gln	Leu
785					790					795					800
Asn	Ser	Gln	Ser	Val	Glu	Ile	Thr	Lys	Leu	Gln	Thr	Glu	Lys	Gln	Glu
			805						810					815	
Leu	Leu	Gln	Lys	Thr	Glu	Ala	Phe	Ala	Lys	Ser	Ala	Pro	Val	Pro	Gly
			820					825					830		
Glu	Ser	Glu	Thr	Val	Ile	Ala	Thr	Lys	Thr	Thr	Asp	Val	Glu	Gly	Arg
	835						840					845			
Leu	Ser	Ala	Leu	Leu	Gln	Glu	Thr	Lys	Glu	Leu	Lys	Asn	Glu	Ile	Lys
	850				855						860				
Ala	Leu	Ser	Glu	Glu	Arg	Thr	Ala	Ile	Lys	Glu	Gln	Leu	Asp	Ser	Ser
865					870					875					880
Asn	Ser	Thr	Ile	Ala	Ile	Leu	Gln	Asn	Glu	Lys	Asn	Lys	Leu	Glu	Val
			885						890					895	
Asp	Ile	Thr	Asp	Ser	Lys	Lys	Glu	Gln	Asp	Asp	Leu	Leu	Val	Leu	Leu
			900					905					910		
Ala	Asp	Gln	Asp	Gln	Lys	Ile	Phe	Ser	Leu	Lys	Asn	Lys	Leu	Lys	Glu
		915					920					925			
Leu	Gly	His	Pro	Val	Glu	Glu	Glu	Asp	Glu	Leu	Glu	Ser	Gly	Asp	Gln
	930					935					940				
Asp	Asp	Glu	Asp	Asp	Glu	Asp	Glu	Asp	Asp	Gly	Lys	Glu	Gln	Gly	His
945					950					955					960
Ile															

<210> 67  
 <211> 959  
 <212> PRT  
 <213> Rattus norvegicus

<400> 67  
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 His Thr Glu Ala Glu Thr Ile Gln Lys Leu Cys Asp Arg Val Ala Ser  
 20 25 30  
 Ser Thr Leu Leu Asp Asp Arg Arg Asn Ala Val Arg Ala Leu Lys Ser  
 35 40 45  
 Leu Ser Lys Lys Tyr Arg Leu Glu Val Gly Ile Gln Ala Met Glu His  
 50 55 60  
 Leu Ile His Val Leu Gln Thr Asp Arg Ser Asp Ser Glu Ile Ile Ala  
 65 70 75 80  
 Tyr Ala Leu Asp Thr Leu Tyr Asn Ile Ile Ser Asn Asp Glu Glu Glu  
 85 90 95

Glu	Val	Glu	Glu	Asn	Ser	Thr	Arg	Gln	Ser	Glu	Asp	Leu	Gly	Ser	Gln
			100					105					110		
Phe	Thr	Glu	Ile	Phe	Ile	Lys	Gln	Pro	Glu	Asn	Val	Thr	Leu	Leu	Leu
		115					120					125			
Ser	Leu	Leu	Glu	Glu	Phe	Asp	Phe	His	Val	Arg	Trp	Pro	Gly	Val	Arg
	130					135					140				
Leu	Leu	Thr	Ser	Leu	Leu	Lys	Gln	Leu	Gly	Pro	Pro	Val	Gln	Gln	Ile
145					150					155					160
Ile	Leu	Val	Ser	Pro	Met	Gly	Val	Ser	Lys	Leu	Met	Asp	Leu	Leu	Ala
				165					170					175	
Asp	Ser	Arg	Glu	Ile	Ile	Arg	Asn	Asp	Gly	Val	Leu	Leu	Leu	Gln	Ala
			180					185					190		
Leu	Thr	Arg	Ser	Asn	Gly	Ala	Ile	Gln	Lys	Ile	Val	Ala	Phe	Glu	Asn
	195						200					205			
Ala	Phe	Glu	Arg	Leu	Leu	Asp	Ile	Ile	Thr	Glu	Glu	Gly	Asn	Ser	Asp
	210					215					220				
Gly	Gly	Ile	Val	Val	Glu	Asp	Cys	Leu	Ile	Leu	Leu	Gln	Asn	Leu	Leu
225					230					235					240
Lys	Asn	Asn	Asn	Ser	Asn	Gln	Asn	Phe	Phe	Lys	Glu	Gly	Ser	Tyr	Ile
				245					250					255	
Gln	Arg	Met	Lys	Ala	Trp	Phe	Glu	Val	Gly	Asp	Glu	Asn	Pro	Gly	Trp
			260					265					270		
Ser	Ala	Gln	Lys	Val	Thr	Asn	Leu	His	Leu	Met	Leu	Gln	Leu	Val	Arg
	275						280					285			
Val	Leu	Val	Ser	Pro	Thr	Asn	Pro	Pro	Gly	Ala	Thr	Ser	Ser	Cys	Gln
	290					295					300				
Lys	Ala	Met	Phe	Gln	Cys	Gly	Leu	Leu	Gln	Gln	Leu	Cys	Thr	Ile	Leu
305					310					315					320
Met	Ala	Thr	Gly	Ile	Pro	Ala	Asp	Ile	Leu	Thr	Glu	Thr	Ile	Asn	Thr
			325						330					335	
Val	Ser	Glu	Val	Ile	Arg	Gly	Cys	Gln	Val	Asn	Gln	Asp	Tyr	Phe	Ala
		340						345					350		
Ser	Val	Asn	Ala	Pro	Ser	Asn	Pro	Pro	Arg	Pro	Ala	Ile	Val	Val	Leu
	355						360					365			
Leu	Met	Ser	Met	Val	Asn	Glu	Arg	Gln	Pro	Phe	Val	Leu	Arg	Cys	Ala
	370					375					380				
Val	Leu	Tyr	Cys	Phe	Gln	Cys	Phe	Leu	Tyr	Lys	Asn	Glu	Lys	Gly	Gln
385					390					395					400
Gly	Glu	Ile	Val	Ala	Thr	Leu	Leu	Pro	Ser	Thr	Ile	Asp	Ala	Thr	Gly
			405						410					415	
Asn	Ser	Val	Ser	Ala	Gly	Gln	Leu	Leu	Cys	Gly	Gly	Leu	Phe	Ser	Thr
			420					425					430		
Asp	Ser	Leu	Ser	Asn	Trp	Cys	Ala	Ala	Val	Ala	Leu	Ala	His	Ala	Leu
	435						440					445			
Gln	Gly	Asn	Ala	Thr	Gln	Lys	Glu	Gln	Leu	Leu	Arg	Val	Gln	Leu	Ala
	450					455					460				
Thr	Ser	Ile	Gly	Asn	Pro	Pro	Val	Ser	Leu	Leu	Gln	Gln	Cys	Thr	Asn
465					470					475					480
Ile	Leu	Ser	Gln	Gly	Ser	Lys	Ile	Gln	Thr	Arg	Val	Gly	Leu	Leu	Met
			485						490					495	
Leu	Leu	Cys	Thr	Trp	Leu	Ser	Asn	Cys	Pro	Ile	Ala	Val	Thr	His	Phe
			500					505					510		
Leu	His	Asn	Ser	Ala	Asn	Val	Pro	Phe	Leu	Thr	Gly	Gln	Ile	Ala	Glu
	515						520					525			
Asn	Leu	Gly	Glu	Glu	Glu	Gln	Leu	Val	Gln	Gly	Leu	Cys	Ala	Leu	Leu
	530					535					540				
Leu	Gly	Ile	Ser	Ile	Tyr	Phe	Asn	Asp	Asn	Ser	Leu	Glu	Asn	Tyr	Thr
545					550					555					560
Lys	Glu	Lys	Leu	Lys	Gln	Leu	Ile	Glu	Lys	Arg	Ile	Gly	Lys	Glu	Asn
				565					570					575	
Tyr	Ile	Glu	Lys	Leu	Gly	Phe	Ile	Ser	Lys	His	Glu	Leu	Tyr	Ser	Arg
			580					585					590		
Ala	Ser	Gln	Lys	Pro	Gln	Pro	Asn	Phe	Pro	Ser	Pro	Glu	Tyr	Met	Ile



Gln	Phe	Glu	Val	His	Thr	Gln	Asn	Leu	Pro	Gln	Glu	Leu	Gln	Thr	Met
				85					90					95	
Thr	Arg	Glu	Leu	Cys	Leu	Leu	Lys	Glu	Gln	Leu	Leu	Glu	Lys	Asp	Glu
			100					105					110		
Glu	Ile	Val	Glu	Leu	Lys	Ala	Glu	Arg	Asn	Asn	Thr	Arg	Leu	Leu	Leu
		115					120					125			
Glu	His	Leu	Glu	Cys	Leu	Val	Ser	Arg	His	Glu	Arg	Ser	Leu	Arg	Met
	130					135					140				
Thr	Val	Met	Lys	Arg	Gln	Ala	Gln	Asn	His	Ala	Gly	Val	Ser	Ser	Glu
145					150					155					160
Val	Glu	Val	Leu	Lys	Ala	Leu	Lys	Ser	Leu	Phe	Glu	His	His	Lys	Ala
				165				170						175	
Leu	Asp	Glu	Lys	Val	Arg	Glu	Arg	Leu	Arg	Val	Ala	Met	Glu	Arg	Val
			180					185					190		
Ala	Thr	Leu	Glu	Glu	Glu	Leu	Ser	Thr	Lys	Gly	Asp	Glu	Asn	Ser	Ser
		195					200					205			
Leu	Lys	Ala	Arg	Ile	Ala	Thr	Tyr	Ala	Ala	Glu	Ala	Glu	Glu	Ala	Met
	210					215					220				
Ala	Ser	Asn	Ala	Pro	Ile	Asn	Gly	Ser	Ile	Ser	Ser	Glu	Ser	Ala	Asn
225					230					235					240
Arg	Leu	Ile	Glu	Met	Gln	Glu	Ala	Leu	Glu	Arg	Met	Lys	Thr	Glu	Leu
				245					250					255	
Ala	Asn	Ser	Leu	Lys	Gln	Ser	Thr	Glu	Ile	Thr	Thr	Arg	Asn	Ala	Glu
			260					265					270		
Leu	Glu	Asp	Gln	Leu	Thr	Glu	Asp	Ala	Arg	Glu	Lys	His	Ala	Ala	Gln
		275					280					285			
Glu	Ser	Ile	Val	Arg	Leu	Lys	Asn	Gln	Ile	Cys	Glu	Leu	Asp	Ala	Gln
	290					295					300				
Arg	Thr	Asp	Gln	Glu	Thr	Arg	Ile	Thr	Thr	Phe	Glu	Ser	Arg	Phe	Leu
305					310					315					320
Thr	Ala	Gln	Arg	Glu	Ser	Thr	Cys	Ile	Arg	Asp	Leu	Asn	Asp	Lys	Leu
				325					330					335	
Glu	His	Gln	Leu	Ala	Asn	Lys	Asp	Ala	Ala	Val	Arg	Leu	Asn	Glu	Glu
			340					345					350		
Lys	Val	His	Ser	Leu	Gln	Glu	Arg	Leu	Glu	Leu	Ala	Glu	Lys	Gln	Leu
		355					360					365			
Ala	Gln	Ser	Leu	Lys	Lys	Ala	Glu	Ser	Leu	Pro	Ser	Val	Glu	Ala	Glu
		370				375					380				
Leu	Gln	Gln	Arg	Met	Glu	Ala	Leu	Thr	Ala	Ala	Glu	Gln	Lys	Ser	Val
385					390					395					400
Ser	Ala	Glu	Glu	Arg	Ile	Gln	Arg	Leu	Asp	Arg	Asn	Ile	Gln	Glu	Leu
				405					410					415	
Ser	Ala	Glu	Leu	Glu	Arg	Ala	Val	Gln	Arg	Glu	Arg	Met	Asn	Glu	Glu
			420					425					430		
His	Ser	Gln	Arg	Leu	Ser	Ser	Thr	Val	Asp	Lys	Leu	Leu	Ser	Glu	Ser
		435					440					445			
Asn	Asp	Arg	Leu	Gln	Leu	His	Leu	Lys	Glu	Arg	Met	Gln	Ala	Leu	Asp
	450					455					460				
Asp	Lys	Asn	Arg	Leu	Thr	Gln	Gln	Leu	Asp	Gly	Thr	Lys	Lys	Ile	Tyr
465					470					475					480
Asp	Gln	Ala	Glu	Arg	Ile	Lys	Asp	Arg	Leu	Gln	Arg	Asp	Asn	Glu	Ser
				485					490					495	
Leu	Arg	Gln	Glu	Ile	Glu	Ala	Leu	Arg	Gln	Gln	Leu	Tyr	Asn	Ala	Arg
			500					505					510		
Thr	Ala	Gln	Phe	Gln	Ser	Arg	Met	His	Ala	Ile	Pro	Phe	Thr	His	Ala
			515				520					525			
Gln	Asn	Ile	Val	Gln	Gln	Gln	Pro	Gln	Ala	Ser	Ile	Ala	Gln	Gln	Ser
	530					535					540				
Ala	Tyr	Gln	Met	Tyr	Lys	Gln	Gln	Pro	Ala	Gln	Gln	Tyr	Gln	Thr	Val
545					550					555					560
Gly	Met	Arg	Arg	Pro	Asn	Lys	Gly	Arg	Ile	Ser	Ala	Leu	Gln	Asp	Asp
				565					570					575	
Pro	Asn	Lys	Val	Gln	Thr	Leu	Asn	Glu	Gln	Glu	Trp	Asp	Arg	Leu	Gln





Gly	Ser	Gln	Asp	Val	Pro	Asn	Arg	Gln	Leu	Leu	Glu	Lys	Lys	Phe	Ile
	1090					1095					1100				
Gly	Leu	Val	Asn	Asp	His	Arg	Gln	Gln	Ser	Asp	Pro	His	Pro	Arg	Ser
1105					1110					1115					1120
Gly	Ser	Ser	Arg	Lys	Asn	Asp	Ser	Ile	Ala	Lys	Ser	Tyr	Glu	Phe	His
				1125					1130					1135	
Leu	Tyr	Thr													

<210> 69  
 <211> 950  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 69

Met	Tyr	Ser	Arg	His	Ser	Ile	Ser	Asp	Ala	Tyr	Gly	Ala	Val	Cys	Ile
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Leu	Pro	Glu	Asp	Thr	Leu	Thr	Val	Ser	Ser	Ser	Gln	Asn	Ser	His	Ile
			20					25					30		
Asp	Ala	Phe	Ala	Ala	Leu	Val	Asp	Arg	Glu	Arg	Asp	Ser	Ser	Arg	Ser
		35					40					45			
Ser	Gly	Ser	Gly	Asn	Ile	Phe	Lys	Asp	Asn	Gly	Ser	Ile	Lys	Arg	Arg
	50				55					60					
Gln	Ala	Leu	Pro	Tyr	Val	Thr	His	Tyr	Ser	Asp	Ser	Gly	Phe	Gly	Ser
65					70				75						80
Ala	Pro	Ser	Ala	Gly	Ser	Ser	Cys	Ser	Tyr	Leu	Pro	Pro	Pro	Pro	Pro
				85					90					95	
Tyr	Arg	Met	Arg	Gly	Ser	Gly	Gly	Leu	Ser	Ser	Lys	Pro	Gln	His	Lys
			100					105					110		
Ile	His	Arg	Ser	Leu	Ser	Asp	Ser	Lys	Tyr	Thr	Ala	Ser	Leu	Met	Thr
		115					120					125			
Thr	Gly	Val	Pro	Thr	Leu	Pro	Leu	Leu	Ser	Met	Thr	Pro	Phe	Asn	Gln
	130					135					140				
Leu	Gln	Ser	Arg	Asp	Ala	Arg	Gly	Ala	Ser	Trp	Ile	Ser	Leu	Val	Arg
145					150					155					160
Ala	Pro	Asn	Phe	His	Leu	Tyr	Cys	Phe	Phe	Val	Phe	Phe	Phe	Ser	Phe
				165					170					175	
Asn	Ile	Asp	Glu	Thr	Phe	Arg	Asn	Ser	Asn	Ile	Ser	Ser	Pro	Ser	Pro
		180						185					190		
Ser	Met	Ser	Thr	Val	Ser	Cys	Pro	Glu	Tyr	Pro	Glu	Leu	Gln	Asp	Lys
		195					200					205			
Leu	His	Arg	Leu	Ala	Met	Ala	Arg	Asp	Ser	Leu	Gln	Leu	Gln	Val	Ser
	210					215					220				
Val	Leu	Ser	Glu	Gln	Val	Gly	Ala	Gln	Lys	Glu	Lys	Ile	Lys	Asp	Leu
225					230					235					240
Glu	Thr	Val	Ile	Ala	Leu	Lys	Arg	Asn	Asn	Leu	Thr	Ser	Thr	Glu	Glu
				245					250					255	
Leu	Leu	Gln	Asp	Lys	Tyr	His	Arg	Ile	Asp	Glu	Cys	Gln	Glu	Leu	Glu
			260					265					270		
Ser	Lys	Lys	Met	Asp	Leu	Leu	Ala	Glu	Val	Ser	Ser	Leu	Lys	Leu	Arg
		275					280					285			
Tyr	Ala	Thr	Leu	Glu	Arg	Glu	Lys	Asn	Glu	Thr	Glu	Lys	Lys	Leu	Arg
	290					295					300				
Leu	Ser	Gln	Asn	Glu	Met	Asp	His	Val	Asn	Gln	Ser	Met	His	Gly	Met
305					310					315					320
Val	Val	Gln	Gln	Gln	Leu	Ala	His	His	Thr	Asn	Gly	His	Ser	Ser	Gly
				325					330					335	
Gly	Tyr	Met	Ser	Pro	Leu	Arg	Glu	His	Arg	Ser	Glu	Lys	Asn	Asp	Asp
			340					345					350		
Glu	Met	Ser	Gln	Leu	Arg	Thr	Ala	Val	Gln	Arg	Leu	Met	Ala	Asp	Asn
		355					360					365			
Glu	His	Lys	Ser	Leu	Gln	Ile	Asn	Thr	Leu	Arg	Asn	Ala	Leu	Asp	Glu

370	Gln	Met	Arg	Ser	Arg	Ser	375	Gln	Gln	Glu	Asp	Phe	380	Tyr	Ala	Ser	Gln	Arg
385	Asn	Tyr	Thr	Asp	Asn	Phe	390	Asp	Val	Asn	Ala	Gln	395	Ile	Arg	Arg	Ile	Leu
				405							410						415	
	Met	Asp	Glu	Pro	Ser	Asp	Ser	Met	Ser	His	Ser	Thr	Ser	Phe	Pro	Val		
			420					425						430				
	Ser	Leu	Ser	Ser	Thr	Thr	Ser	Asn	Gly	Lys	Gly	Pro	Arg	Ser	Thr	Val		
			435					440						445				
	Gln	Ser	Ser	Ser	Tyr	Asn	Ser	Ser	Leu	Ser	Ala	Val	Ser	Pro	Gln			
			450			455					460							
	His	Asn	Trp	Ser	Ser	Ala	Gly	Ala	Gly	Thr	Pro	Arg	Gln	Leu	His	Pro		
465					470						475					480		
	Ile	Gly	Gly	Asn	Gln	Arg	Val	Asn	Asn	Ile	Thr	Ser	Ala	Gln	Tyr	Cys		
				485						490					495			
	Ser	Pro	Ser	Pro	Ala	Ala	Arg	Gln	Leu	Ala	Ala	Glu	Leu	Asp	Glu			
			500					505					510					
	Leu	Arg	Arg	Asn	Gly	Asn	Glu	Gly	Ala	Asn	His	Asn	Tyr	Ser	Ser	Ala		
			515					520					525					
	Ser	Leu	Pro	Arg	Gly	Val	Gly	Lys	Ala	Ser	Ser	Thr	Leu	Thr	Leu	Pro		
			530				535					540						
	Ser	Lys	Lys	Leu	Ser	Val	Ala	Ser	Gly	Thr	Ser	Val	Val	Glu	Ser	Asp		
545					550						555					560		
	Asp	Glu	Ile	Ala	Arg	Gly	Arg	Asn	Leu	Asn	Asn	Ala	Thr	Ser	Gln	Ser		
				565					570						575			
	Asn	Leu	Lys	Asn	Phe	Ser	Arg	Glu	Arg	Thr	Arg	Ser	Ser	Leu	Arg	Asn		
			580						585					590				
	Ile	Phe	Ser	Lys	Leu	Thr	Arg	Ser	Thr	Ser	Gln	Asp	Gln	Ser	Asn	Ser		
			595					600					605					
	Phe	Arg	Arg	Gly	Ser	Ala	Ala	Arg	Ser	Thr	Ser	Thr	Ala	Arg	Leu	Gly		
			610				615					620						
	Ser	Thr	Asn	His	Leu	Gly	Thr	Val	Ser	Lys	Arg	Pro	Pro	Leu	Ser	Gln		
625					630						635					640		
	Phe	Val	Asp	Trp	Arg	Ser	Glu	Gln	Leu	Ala	Asp	Trp	Ile	Ala	Glu	Ile		
				645					650						655			
	Gly	Tyr	Pro	Gln	Tyr	Met	Asn	Glu	Val	Ser	Arg	His	Val	Arg	Ser	Gly		
			660					665						670				
	Arg	His	Phe	Leu	Asn	Met	Ser	Met	Asn	Glu	Tyr	Glu	Gly	Val	Leu	Asn		
			675					680					685					
	Ile	Lys	Asn	Pro	Val	His	Arg	Lys	Arg	Val	Ala	Ile	Leu	Leu	Arg	Arg		
			690				695					700						
	Ile	Glu	Glu	Asp	Ile	Met	Glu	Pro	Ala	Asn	Lys	Trp	Asp	Val	His	Gln		
705					710						715					720		
	Thr	Leu	Arg	Trp	Leu	Asp	Asp	Ile	Gly	Leu	Pro	Gln	Tyr	Lys	Asp	Val		
				725					730						735			
	Phe	Ala	Glu	Asn	Val	Val	Asp	Gly	Pro	Leu	Leu	Leu	Ser	Leu	Thr	Ala		
			740					745						750				
	Asn	Asp	Ala	Val	Glu	Met	Lys	Val	Val	Asn	Ala	His	His	Tyr	Ala	Thr		
			755					760					765					
	Leu	Ala	Arg	Ser	Ile	Gln	Phe	Leu	Lys	Lys	Ala	Asp	Phe	Arg	Phe	Asn		
			770				775					780						
	Ala	Met	Glu	Lys	Leu	Ile	Asp	Gln	Asn	Ile	Val	Glu	Lys	Tyr	Pro	Cys		
785					790						795					800		
	Pro	Asp	Val	Val	Val	Arg	Trp	Thr	His	Ser	Ala	Thr	Cys	Glu	Trp	Leu		
				805					810						815			
	Arg	Lys	Ile	Asp	Leu	Ala	Glu	Phe	Thr	Gln	Asn	Leu	Leu	Phe	Ala	Gly		
			820					825						830				
	Val	Pro	Gly	Ala	Leu	Met	Ile	Tyr	Glu	Pro	Ser	Phe	Thr	Ala	Glu	Ser		
			835					840					845					
	Leu	Ala	Glu	Ile	Leu	Gln	Met	Pro	Pro	His	Lys	Thr	Leu	Leu	Arg	Arg		
			850			855						860						
	His	Leu	Thr	Ser	His	Phe	Asn	Gln	Leu	Leu	Gly	Pro	Lys	Ile	Ile	Ala		
865					870						875					880		

Asp Lys Arg Asp Phe Leu Ala Ala Gly Asn Tyr Pro Gln Ile Ser Pro  
                   885                  890                  895  
 Thr Gly Arg Val Lys Val Val Lys Lys Gly Phe Ser Leu Thr Arg Lys  
                   900                  905                  910  
 Lys Ala Lys Asn Glu Ile Cys Leu Glu Pro Glu Glu Leu Leu Cys Pro  
                   915                  920                  925  
 Gln Val Leu Val His Lys Tyr Pro Thr Gly Ala Gly Asp Asn Ser Ser  
           930                  935                  940  
 Phe Glu Ser Ser Asn Val  
 945                  950

<210> 70  
 <211> 15  
 <212> PRT  
 <213> human rhinovirus 2  
 <400> 70  
 Val Lys Ala Glu Thr Arg Leu Asn Pro Asp Leu Gln Pro Thr Glu  
   1                  5                  10                  15

<210> 71  
 <211> 24  
 <212> PRT  
 <213> human immunodeficiency virus type 1

<220>  
 <221> VARIANT  
 <222> 14  
 <223> Xaa = Any Amino Acid

<400> 71  
 Tyr Asn Lys Arg Lys Arg Ile His Ile Gly Pro Gly Arg Xaa Phe Tyr  
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 Thr Thr Lys Asn Ile Ile Gly Cys  
                   20

<210> 72  
 <211> 8  
 <212> PRT  
 <213> Artificial  
 <220>  
 <223> selected from synthetic peptides derived from Homo sapiens CD52.

<400> 72  
 Gly Thr Ser Ser Pro Ser Ala Asp  
   1                  5

<210> 73  
 <211> 10  
 <212> PRT  
 <213> Mesocricetus auratus

<400> 73  
 Ala Pro Lys Thr Asn Met Lys His Met Ala  
   1                  5                  10

<210> 74  
 <211> 15

<212> PRT  
 <213> Foot-and-mouth disease virus  
  
 <400> 74  
 Tyr Thr Thr Ser Thr Arg Gly Asp Leu Ala His Val Thr Thr Thr  
 1 5 10 15  
  
 <210> 75  
 <211> 18  
 <212> PRT  
 <213> Human poliovirus 1 Mahoney  
  
 <400> 75  
 Cys Val Thr Ile Met Thr Val Asp Asn Pro Ala Ser Thr Thr Asn Lys  
 1 5 10 15  
 Asp Lys  
  
 <210> 76  
  
 <400> 76  
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 <210> 77  
 <211> 13  
 <212> PRT  
 <213> Artificial  
 <220>  
 <223> Derived from Homo sapiens MUC1 epithelial mucin glycoprotein.  
  
 <400> 77  
 Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr  
 1 5 10  
  
 <210> 78  
 <211> 11  
 <212> PRT  
 <213> Artificial  
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fold back on itself to form the triple helix

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